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### More and Better Chrysanthemums

During the past ten years more scientific investigations have been carried out with the chrysanthemum than with any other one flower.

Why should this flower deserve so much expensive attention? The answer is obvious: this plant is so versatile that it can be made to do most anything and yet produce a very profitable crop. These investigators are responsible for year-around flowering in both cut flowers and potted plants. They too found out how to produce three and even four crops in a period of a year. The environmental factors affecting the growth and flowering have all been investigated. Grading and marketing have been studied. Scientists have solved the majority of the disease and insect problems.

Yet there are many problems still not solved. Investigations will continue for a good number of years. We commercial men are also finding that our problems are not all solved. We have to grow more and better chrysanthemums with less expense. To accomplish this requires proper planning and selections of varieties for each particular area in the United States.

Your **Sloeckner** representatives have the scientific as well as the commercial experience to give you the service you wish in planning your requirements. They are all well versed in the culture of the chrysanthemum.

It is a **Sloeckner** service to make available the latest cultural information on this crop. Our interest in you and your crops by no means ends with the sale, as we are more than anxious to have the materials we sell, grow and prove profitable.

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#### COVER INDEX

The NEW MACHOL EDGE INDEX on the back cover of this year's Manual is there to help you locate the information you want quickly and efficiently. It is the first time such an index has been used in the Florist Industry, and we hope you will let us know if you like it or not.

Gloeckner Company, Incorporated

15 EAST 26th STREET NEW YORK 10, N. Y. (AT MADISON SQUARE) LEXINGTON 2-4197

### TERMS OF SALE

Fifty rooted cuttings of each variety is the minimum that can be supplied. More than 50 of a variety must be in multiples of 50.

Any changes or cancellations of chrysanthemum orders must be received at least 30 days before shipping date.

Every effort is being made to deliver stock which is free from pests, but purchases must be made with the understanding that we assume no responsibility for losses which may result from same.

To facilitate deliveries, cuttings will be shipped on Monday and Tuesday of each week.

#### ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

The Fred C. Gloeckner Co., Inc., warrants to the extent of the purchase price that seeds, bulbs and plants sold are as described on the container, within recognized tolerances. Seller gives no other or further warranty, express or implied.



### Year-Around Flowering of Chrysanthemums

Since the advent of daylength and temperature control, we have seen chrysanthemum cut flowers on the markets every month since 1946, thanks to our nevertiring research workers in various federal and state institutions. Season has been eliminated, and the flowering time can be accurately controlled.

### Response Group

Prior to year-around flowering of chrysanthemums, we referred to varieties as to their natural flowering date. Now that year-around flowering is in general use, we refer to a varity as to its response to short-day treatment. When we say 9 week response, we mean that it will bloom 9 weeks after the short-day treatment is started. A 13-week group requires 13 weeks after short-day treatment is started, and so on with all the other response groups.

### **Daylength Control**

When chrysanthemums are grown around the year, it is very necessary that we know when to apply shade or light to make the plants respond as we desire. The following schedule will give you the proper dates for lighting and shading for each response group.

		ING AND SHA	DING SCHEDU	le le
Response Group	Shading to Stop in Fall	Lighting to Start in Fall	Shading to Start in Spring	Lighting to Stop in Spring
7 week	Aug. 30	July 19	Apr. 12	May 31
8 week	Sept. 6	July 26	Apr. 5	May 24
9 week	Sept. 13	Aug. 2	Mar. 29	May 17
10 week	Sept. 20	Aug. 9	Mar. 22	May 10
11 week	Sept. 27	Aug. 16	Mar. 15	May 3
12 week	Oct. 4	Aug. 23	Mar. 8	Apr. 26
13 week	Oct. 11	Aug. 30	Mar. 1	Apr. 19
14 week	Oct. 18	Sept. 6	Feb. 23	Apr. 12

### Lighting

To prevent formation of flower buds, the light intensity must be 10-foot candles.

When lighting an entire house, the lamps should be installed in the ridge of the house. Usually we figure that it requires 11/2 watts per sq. ft. of area covered; that includes benches and walks. For smaller installations, the spacing given below will be satisfactory for a bench 42 inches to 48 inches wide:

60-watt lamps in a reflector, spaced 4 feet apart, 2 to 3 feet above the tops of the plants.

100-watt lamps in a reflector, spaced 6 feet apart, 2 to 3 feet above the tops of the plants.

Lights must be used according to the schedule above. It has been found that best results are secured by interrupting the night. Begin lighting at 10 p.m. for the number of hours shown below:

#### ADDITIONAL LIGHTING SCHEDULE

- 2 Hours during the months of August, April and May.
- 3 Hours during the months of September, October and March.
- 4 Hours during the months of November and February.
- 5 Hours during the months of December and January.

### Year-Around Flowering of Chrysanthemums

### **Shading**

Use a good durable **Black Cloth** which when applied will reduce the light intensity to 2-foot candles or less. More light intensity than this will result in delayed flowering and unevenness of bloom.

The cloth should be applied at 5 p.m. and removed at 8 a.m. Continue covering each evening on pompons until the latest buds show color and most of the flowers are well developed. For large flowering varieties, shading can be discontinued after all flowering buds have attained the diameter of approximately one-half inch.

Be sure that covering is complete on all benches shaded, as any leaks in light will cause uneven spots in the bench at blooming time.

Black cloth should be applied each evening. Missing one night a week will give fair results, but delayed flowering results when cloth is not applied each evening.

### **Temperature Control**

For bud formation, a minimum temperature of 60-65 degrees should be maintained. During the growing period, a night temperature near 60 degrees is ideal. When black cloth treatment is started, raise the night temperature to 60 degrees until color shows and then drop to 52 to 55 degrees. Excessive high temperatures prohibit the bud development, and during seasons of night temperatures above 90 degrees, it is suggested that the black cloth be raised after sunset and lowered again in the morning before daylight. This cooler temperature hastens the development of the buds.

Temperature regulation becomes a problem to the grower who is growing a single bench of chrysanthemums in a cool house. A simple method is to apply black cloth, allowing the cloth to drop to the floor on each side of the bench and then turn on the heat lines under the bench. This will trap the heat under the cloth and raise the temperature sufficiently to set buds.

### **Interrupted Lighting**

You get quality when you control the spray formation in pompons. The control is easy and consists of inter-

rupting the lighting: It will give you no more work but does take a little more planning. The control gives you a spray with a more open head; the spray is more uniform; the flowers are larger, and the color is more intense.

In timing a crop which is to receive an interrupted-lighting treatment, we must start the short-day treatment earlier than normally, advancing the date by the number of long days which will be used to interrupt the short-day period. For example, if the short-day treatment were to start on January 15 and continue to flowering. The interrupted-lighting treatment is set up for 10 short days followed by 10 long days. Short days would be given the plants from January 5 to 15, followed by 10 long days until January 25 and then short days to flowering. Remember that the total number of long days is the same as given in the schedule.

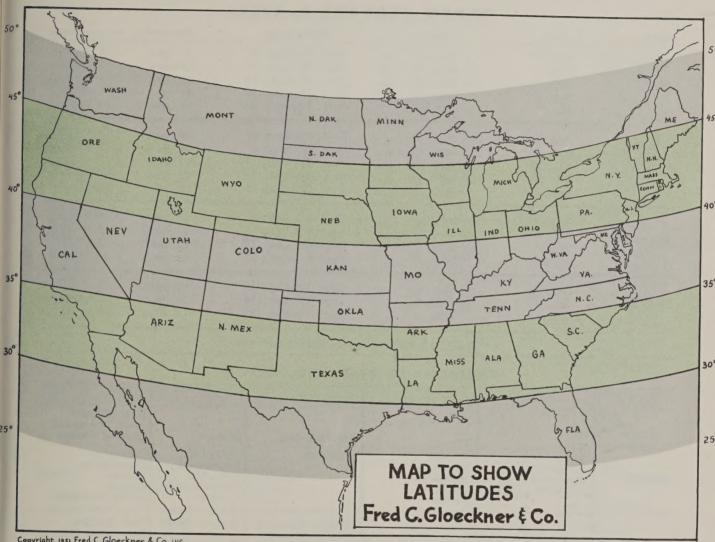
### Use of Interrupted Lighting Only on 8, 9, and 10-Week Response Varieties

Week response	Number of short days followed by 10 long days
8 week	9 short days
9 week	10 short days
10 week	11 short days

An interrupted-lighting treatment of 10 short days, 10 long days, then short days to flowering has made it possible to improve the quality of pompons by improving the spray formation; now this same treatment can be used on certain standard varieties where quality is poor because of open centers. Best to try interrupted lighting on a limited scale until you know how to handle this treatment.

Much research on interrupted lighting is now being done to find the exact number of short days and long days for each response group. We feel that this information is very valuable for growers who are flowering 8, 9 and 10-week varieties during January, February and March in Florida.

### Year-Around Flowering of Chrysanthemums



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### Year-Around Chrysanthemum Flowering Schedule

### BLOOM JANUARY 3, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 9	Aug. 30	Sept. 6 -Sept. 27	no	14 Week
	Aug. 9	Aug. 30	Aug. 30-Oct. 4	no	13 Week
40-45°	Aug. 9	Aug. 30	Aug. 23-Oct. 11	no	12 Week
	Aug. 9	Aug. 30	Aug. 16-Oct. 18	no	11 Week
	Aug. 9	Aug. 30	Aug. 9 —Oct. 25	no	10 Week
	Aug. 23	Sept. 13	Sept. 6 —Sept. 27	no	14 Week
	Aug. 23	Sept. 13	Aug. 30-Oct. 4	no	13 Week
35-40°	Aug. 23	Sept. 13	Aug. 23-Oct. 11	no	12 Week
	Aug. 23	Sept. 13	Aug. 23-Oct. 18	no	11 Week
	Aug. 23	Sept. 13	Aug. 23-Oct. 25	no	10 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 4	no	13 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 11	no	12 Week
30-35°	Sept. 6	Sept. 27	Sept. 6 -Oct. 18	no	11 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 25	no	10 Week
	Sept. 13	Oct. 4	Sept. 13-Oct. 11	no	12 Week
25-30°	Sept. 13	Oct. 4	Sept. 13-Oct. 18	no	11 Week
	Sept. 13	Oct. 4	Sept. 13-Oct. 25	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Illini Igloo Shasta Encore Little America
	S			Golden Pearson Yel. Chattan'ga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcap Cr. Snowcrest Yel. Snowcrest Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Mast'p'ce
	s				Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Linda Lou Rose Mast'p'ce Taffeta Portrait

## Chrysanthemin Manual

### Year-Around Chrysanthemum Flowering Schedule

### BLOOM JANUARY 10, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 16	Sept. 6	Sept. 6 -Oct. 4	no	14 Week
	Aug. 16	Sept. 6	Aug. 30-Oct. 11	no	13 Week
40-45°	Aug. 16	Sept. 6	Aug. 23-Oct. 18	no	12 Week
	Aug. 16	Sept. 6	Aug. 16-Oct. 25	no	11 Week
	Aug. 16	Sept. 6	Aug. 16-Nov. 1	no	10 Week
	Aug. 30	Sept. 20	Sept. 6 -Oct. 4	no	14 Week
	Aug. 30	Sept. 20	Aug. 30-Oct. 11	no	13 Week
35-40°	Aug. 30	Sept. 20	Aug. 30-Oct. 18	no	12 Week
	Aug. 30	Sept. 20	Aug. 30-Oct. 25	no	11 Week
	Aug. 30	Sept. 20	Aug. 30-Nov. 1	no	10 Week
	Sept. 13	Oct. 4	Sept. 13-Oct. 11	no	13 Week
00.050	Sept. 13	Oct. 4	Sept. 13-Oct. 18	no	12 Week
30-35°	Sept. 13	Oct. 4	Sept. 13-Oct. 25	no	11 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 1	no	10 Week
	Sept. 20	Oct. 11	Sept. 20-Oct. 18	, no	12 Week
25-30°	Sept. 20	Oct. 11	Sept. 20—Oct. 25	no	11 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 1	no	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Illini Igloo Shasta Encore Little America
	S			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcap Cr. Snowcrest Yel. Snowcrest Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S		,	Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk.Br.Mast'p'ce
	s				Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Linda Lou Rose Mast'p'ce Taffeta Portrait



### BLOOM JANUARY 17, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 23	Sept. 13	Sept. 6 -Oct. 11	no	14 Week
	Aug. 23	Sept. 13	Aug. 30-Oct. 18	no	13 Week
40-45°	Aug. 23	Sept. 13	Aug. 23-Oct. 25	no	12 Week
	Aug. 23	Sept. 13	Aug. 23-Nov. 1	no	11 Week
	Aug. 23	Sept. 13	Aug. 23-Nov. 8	no	10 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 11	no	14 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 18	no	13 Week
35-40°	Sept. 6	Sept. 27	Sept. 6 -Oct. 25	no	12 Week
	Sept. 6	Sept. 27	Sept. 6 -Nov. 1	no	11 Week
	Sept. 6	Sept. 27	Sept. 6 -Nov. 8	no	10 Week
-	Sept. 20	Oct. 11	Sept. 20-Oct. 18	no	13 Week
00.050	Sept. 20	Oct. 11	Sept. 20-Oct. 25	no	12 Week
30-35°	Sept. 20	Oct. 11	Sept. 20-Nov. 1	no	11 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 8	no	10 Week
	Sept. 27	Oct. 18	Sept. 27-Oct. 25	no	12 Week
25-30°	Sept. 27	Oct. 18	Sept. 27-Nov. 1	no	11 Week
	Sept. 27	Oct. 18	Sept. 27-Nov. 8	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cofillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Illini Igloo Shasta Encore Little America
	s			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcap Cr. Snowcrest Yel. Snowcrest Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstřel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk.Br.Masi'p'ce
-	S			4	Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Linda Lou Rose Mast'p'ce Taffeta Portrait

BLOOM JANUARY 24, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 30	Sept. 20	Sept. 6 -Oct. 18	no	14 Week
	Aug. 30	Sept. 20	Aug. 30-Oct. 25	no	13 Week
40-45°	Aug. 30	Sept. 20	Aug. 30-Nov. 1	no	12 Week
	Aug. 30	Sept. 20	Aug. 30-Nov. 8	no	11 Week
	Aug. 30	Sept. 20	Aug. 30-Nov. 15	no	10 Week
	Sept. 13	Oct. 4	Sept. 13-Oct. 18	no	14 Week
	Sept. 13	Oct. 4	Sept. 13-Oct. 25	no	13 Week
35-40°	Sept. 13	Oct. 4	Sept. 13-Nov. 1	no	12 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 8	no	11 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 15	no	10 Week
	Sept. 27	Oct. 18	Sept. 27—Oct. 25	no	13 Week
	Sept. 27	Oct. 18	Sept. 27-Nov. 1	no	12 Week
30-35°	Sept. 27	Oct. 18	Sept. 27-Nov. 8	no	11 Week
	Sept. 27	Oct. 18	Sept. 27-Nov. 15	no	10 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 1	no	12 Week
25-30°	Oct. 4	Oct. 25	Oct. 4 -Nov. 8	no	11 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 15	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	s			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	s			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Gold. Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Or. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Mast'p'ce
	S				Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Portrait Linda Lou Rose Mast'p'ce Taffeta



### BLOOM JANUARY 31, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Sept. 6	Sept. 27	Sept. 6 -Oct. 25	no	14 Week
	Sept. 6	Sept. 27	Sept. 6 -Nov. 1	no	13 Week
40-45°	Sept. 6	Sept. 27	Sept. 6 -Nov. 8	no	12 Week
	Sept. 6	Sept. 27	Sept. 6 -Nov. 15	no	11 Week
	Sept. 6	Sept. 27	Sept. 6 -Nov. 22	no	10 Week
	Sept. 20	Oct. 11	Sept. 20-Oct. 25	no	14 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 1	no	13 Week
35-40°	Sept. 20	Oct. 11	Sept. 20-Nov. 8	no	12 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 15	no	11 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 22	no	10 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 1	no	13 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 8	no	12 Week
30-35°	Oct. 4	Oct. 25	Oct. 4 -Nov. 15	no	11 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 22	no	10 Week
. A.	Oct. 11	Nov. 1	Oct. 11-Nov. 8	no	12 Week
25-30°	Oct. 11	Nov. 1	Oct. 11-Nov. 15	no	11 Week
20 00	Oct. 11	Nov. 1	Oct. 11—Nov. 22	no	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

	1	14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	s			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Mast'p'ce
	S			8	Thanks. Pink	Ind. Pink Dk. Orch. Queer Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Portrait Linda Lou Rose Mast'p'ce Taffeta

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### Year-Around Chrysanthemum Flowering Schedule

### BLOOM FEBRUARY 7, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Sept. 13	Oct. 4	Sept. 13-Nov. 1	no	14 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 8	no	13 Week
40-45°	Sept. 13	Oct. 4	Sept. 13-Nov. 15	no	12 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 22	no	11 Week
	Sept. 13	Oct. 4	Sept. 13-Nov. 29	no	10 Week
	Sept. 27	Oct. 18	Sept. 27—Nov. 8	no	13 Week
0F 400	Sept. 27	Oct. 18	Sept. 27-Nov. 15	no	12 Week
35-40°	Sept. 27	Oct. 18	Sept. 27-Nov. 22	no	11 Week
	Sept. 27	Oct. 18	Sept. 27-Nov. 29	no	10 Week
	Oct. 11	Nov. 1	Oct. 11Nov. 8	no	13 Week
00.050	Oct. 11	Nov. 1	Oct. 11-Nov. 15	no	12 Week
30-35°	Oct. 11	Nov. 1	Oct. 11-Nov. 22	no	11 Week
	Oct, 11	Nov. 1	Oct. 11-Nov. 29	no	10 Week
	Oct. 18	Nov. 8	Oct. 18-Nov. 15	no	12 Week
25-30°	Oct. 18	Nov. 8	Oct. 18-Nov. 22	no	11 Week
	Oct. 18	Nov. 8	Oct. 18-Nov. 29	no	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	s			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Mast'p'ce
	S				Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Portraif Linda Lou Rose Mast'p'ce Taffeta



### BLOOM FEBRUARY 14, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Sept. 20	Oct. 11	Sept. 20-Nov. 8	no	14 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 15	no	13 Week
40-45°	Sept. 20	Oct. 11	Sept. 20-Nov. 22	no	12 Week
	Sept. 20	Oct. 11	Sept. 20-Nov. 29	no	11 Week
	Sept. 20	Oct. 11	Sept. 20—Dec. 6	no	10 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 15	no	13 Week
	Oct. 4	Oct. 25	Oct. 4 -Nov. 22	no	12 Week
35-40°	Oct. 4	Oct. 25	Oct. 4 -Nov. 29	no	11 Week
	Oct. 4	Oct. 25	Oct. 4 —Dec. 6	no	10 Week
	Oct. 18	Nov. 8	Oct. 18-Nov. 15	no	13 Week
	Oct. 18	Nov. 8	Oct. 18-Nov. 22	no	12 Week
30-35°	Oct. 18	Nov. 8	Oct. 18-Nov. 29	no	11 Week
	Oct. 18	Nov. 8	Oct. 18—Dec. 6	no	10 Week
	Oct. 25	Nov. 15	Oct. 25-Nov. 22	no	12 Week
25-30°	Oct. 25	Nov. 15	Oct. 25-Nov. 29	no	11 Week
	Oct. 25	Nov. 15	Oct. 25—Dec. 6	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		14 Week	13 Week	12 Week	11 Week	10 Week
	S			Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	S			Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
AETTOM	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Param't	Barcarole Or. Beauregard Brigadoon Yellow Shasta
BRONZE	S			Oak Leaf		Ind. Bronze Br. Orch. Queen
& RED	P	Br. Riviera Merrymaker	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk.Br. Mast'p'ce
PINK	S			·	Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
FIRE	P	Riviera Serrated Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Portrait Linda Lou Rose Mast'p'ce Taffeta

# Gloeckner Chrysanthemin Manual

### Year-Around Chrysanthemum Flowering Schedule

### BLOOM FEBRUARY 21, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Sept. 27	Oct. 18	Sept. 27-Nov. 22	no	13 Week
40 450	Sept. 27	Oct. 18	Sept. 27-Nov. 29	no	12 Week
40-45°	Sept. 27	Oct. 18	Sept. 27—Dec. 6	no	11 Week
	Sept. 27	Oct. 18	Sept. 27—Dec. 13	no	10 Week
	Oct. 11	Nov. 1	Oct. 11-Nov. 22	no	13 Week
05 400	Oct. 11	Nov. 1	Oct. 11-Nov. 29	no	12 Week
35-40°	Oct. 11	Nov. 1	Oct. 11-Dec. 6	no	11 Week
	Oct. 11	Nov. 1	Oct. 11—Dec. 13	no	10 Week
	Oct. 25	Nov. 15	Oct. 25-Nov. 22	no	13 Week
20.250	Oct. 25	Nov. 15	Oct. 25-Nov. 29	no	12 Week
30-35°	Oct. 25	Nov. 15	Oct. 25-Dec. 6	no	11 Week
	Oct. 25	Nov. 15	Oct. 25-Dec. 13	no	10 Week
	Nov. 1	Nov. 22	Nov. 1Nov. 29	no	12 Week
25-30°	Nov. 1	Nov. 22	Nov. 1 Dec. 6	no	11 Week
	Nov. 1	Nov. 22	Nov. 1 —Dec. 13	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		13 Week	12 Week	11 Week	10 Week
	S		Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	s		Golden Pearson Yel. Chattanooga Dk. Yel. Chattan'ga	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Brandywine Yellow Cameo Cinderella	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Or. Beauregard Brigadoon Yellow Shasta
	S		Oak Leaf		Ind. Bronze Br. Orch. Queen
BRONZE & RED	P	Mahog. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Mast'piece
	S			Thanks. Pink	Ind. Pink Dk. Orch. Queen Orchid Queen
PINK	P	Debutante Minstrel Lt. Pk. Minstrel	Has. Pink	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffeta



### BLOOM FEBRUARY 28, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Oct. 4	Oct. 25	Oct. 4 -Dec. 6	no	12 Week
40-45°	Oct. 4	Oct. 25	Oct. 4 —Dec. 13	no	11 Week
	Oct. 4	Oct. 25	Oct. 4 —Dec. 20	no	10 Week
	Oct. 18	Nov. 8	Oct. 18-Dec. 6	no	12 Week
35-40°	Oct. 18	Nov. 8	Oct. 18-Dec. 13	no	11 Week
	Oct. 18	Nov. 8	Oct. 18—Dec. 20	no	10 Week
	Nov. 1	Nov. 22	Nov. 1 Dec. 6	no	12 Week
30-35°	Nov. 1	Nov. 22	Nov. 1 -Dec. 13	no	11 Week
	Nov. 1	Nov. 22	Nov. 1 —Dec. 20	no	10 Week
	Nov. 8	Nov. 29	Nov. 8 -Dec. 6	no	12 Week
25-30°	Nov. 8	Nov. 29	Nov. 8 -Dec. 13	no	11 Week
	Nov. 8	Nov. 29	Nov. 8 —Dec. 20	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
	s		Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Monarch Wh. Valencia	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	S	Golden Pearson	Yellow Meio Cream Meio Harvesier	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Goldenrod Highlander Yel. Valencia Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Brigadoon Yellow Shasta
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Yolanda Apr. Valencia Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece
	S	4	Thanks. Pink	Ind. Pink Dk. Orchid Queen Orchid Queen
PINK	P	Has. Pink Valencia Dark Valencia	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffeta

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### BLOOM MARCH 7, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Oct. 11	Nov. 1	Oct. 11-Dec. 13	no	12 Week
40-45°	Oct. 11	Nov. 1	Oct. 11-Dec. 20	no	11 Week
	Oct. 11	Nov. 1	Oct. 11-Dec. 27	no	10 Week
	Oct. 25	Nov. 15	Oct. 25-Dec. 13	no	12 Week
35-40°	Oct. 25	Nov. 15	Oct. 25—Dec. 20	no	11 Week
	Oct. 25	Nov. 15	Oct. 25—Dec. 27	no	10 Week
	Nov. 8	Nov. 29	Nov. 8 —Dec. 13	no	12 Week
30-35°	Nov. 8	Nov. 29	Nov. 8 -Dec. 20	no	11 Week
	Nov. 8	Nov. 29	Nov. 8 —Dec. 27	no	10 Week
	Nov. 15	Dec. 6	Nov. 15-Dec. 13	no	12 Week
25-30°	Nov. 15	Dec. 6	Nov. 15-Dec. 20	no	11 Week
	Nov. 15	Dec. 6	Nov. 15-Dec. 27	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
	S		Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Monarch Wh. Valencia	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
	s	Golden Pearson	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Goldenrod Highlander Yel. Valencia Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Brigadoon Yellow Shasta
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Yolanda Apr. Valencia Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece
	S		Thanks. Pink	Ind. Pink Dk. Orchid Queen Orchid Queen
PINK	P	Has. Pink Valencia Dark Valencia	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffeta

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### BLOOM MARCH 14, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Oct. 18	Nov. 8	Oct. 18-Dec. 20	no	12 Week
40-45°	Oct. 18	Nov. 8	Oct. 18-Dec. 27	no	11 Week
40-45	Oct. 18	Nov. 8	Oct. 18-Jan. 3	no	10 Week
	Nov. 1	Nov. 22	Nov. 1 Dec. 20	no	12 Week
35-40°	Nov. 1	Nov. 22	Nov. 1 —Dec. 27	no	11 Week
00 40	Nov. 1	Nov. 22	Nov. 1 —Jan. 3	no	10 Week
	Nov. 15	Dec. 6	Nov. 15-Dec. 20	no	12 Week
30-35°	Nov. 15	Dec. 6	Nov. 15-Dec. 27	no	11 Week
	Nov. 15	Dec. 6	Nov. 15—Jan. 6	no	10 Week
	Nov. 22	Dec. 13	Nov. 22-Dec. 20	no	12 Week
25-30°	Nov. 22	Dec. 13	Nov. 22-Dec. 27	no	11 Week
20 00	Nov. 22	Dec. 13	Nov. 22—Jan. 3	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
	S		Mefo	Ind. White Jean Elizabeth Crystal Queen
White	P	Monarch Wh. Valencia	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore IIini Igloo Shasta Little America
	S	Golden Pearson	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
AETFOM	P	Goldenrod Highlander Yel. Valencia Omega Yel. Galaxy	Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Brigadoon Yellow Shasta
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Yolanda Apr. Valencia Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece
	S		Thanks. Pink	Ind. Pink Dk. Orchid Queen Orchid Queen
PINK	P	Has. Pink Valencia Dark Valencia	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffeta

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### BLOOM MARCH 21, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Oct. 25	Nov. 15	Oct. 25-Dec. 27	no	12 Week
40-45°	Oct. 25	Nov. 15	Oct. 25—Jan. 3	no	11 Week
	Oct. 25	Nov. 15	Oct. 25—Jan. 10	no	10 Week
	Nov. 8	Nov. 29	Nov. 8 —Dec. 27	no	12 Week
35-40°	Nov. 8	Nov. 29	Nov. 8 —Jan. 3	no	11 Week
	Nov. 8	Nov. 29	Nov. 8 —Jan. 10	no	10 Week
	Nov. 15	Dec. 13	Nov. 15-Dec. 27	no	12 Week
30-35°	Nov. 15	Dec. 13	Nov. 15-Jan. 3	no	11 Week
	Nov. 15	Dec. 13	Nov. 15-Jan. 10	no	10 Week
	Nov. 29	Dec. 20	Nov. 29-Dec. 27	no	12 Week
25-30°	Nov. 29	Dec. 20	Nov. 29-Jan. 3	no	11 Week
	Nov. 29	Dec. 20	Nov. 29-Jan. 10	no	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
	S		Meto	Ind. White Jean Elizabeth Crystal Queen
White	P	Monarch Wh. Valencia	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Encore Illini Igloo Shasta Little America
YELLOW	S	Golden Pearson	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
	P	Goldenrod Highlander Yel. Valencia Omega Yel. Galaxy	Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Brigadoon Yellow Shasta
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Yolanda Apr. Valencia Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece
	S		Thanks. Pink	Ind. Pink Dk. Orchid Queen Orchid Queen
PINK	P	Has. Pink Valencia Dark Valencia	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffela

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### BLOOM MARCH 28, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Nov. 1	Nov. 22	Nov. 1 —Jan. 3	no	12 Week
40-45°	Nov. 1	Nov. 22	Nov. 1 —Jan. 10	no	11 Week
	Nov. 1	Nov. 22	Nov. 1 —Jan. 17	no	10 Week
	Nov. 15	Dec. 6	Nov. 15—Jan. 3	no	12 Week
35-40°	Nov. 15	Dec. 6	Nov. 15-Jan. 10	no	11 Week
	Nov. 15	Dec. 6	Nov. 15—Jan. 17	no	10 Week
	Nov. 22	Dec. 20	Nov. 22—Jan. 3	no	12 Week
30-35°	Nov. 22	Dec. 20	Nov. 22—Jan. 10	no	11 Week
	Nov. 22	Dec. 20	Nov. 22—Jan. 17	no	10 Week
	Dec. 6	Dec. 27	Dec. 6 —Jan. 3	no	12 Week
25-30°	Dec. 6	Dec. 27	Dec. 6 —Jan. 10	no	11 Week
20 00	Dec. 6	Dec. 27	Dec. 6 —Jan. 17	no	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
	S		Mefo	Ind. White Jean Elizabeth Crystal Queen
White	P	Monarch Wh. Valencia	Sculpture Highbrow Priscilla Paramount Belray	Whitefop Encore Illini Igloo Shasta Little America
	S	Golden Pearson	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Ind. Imp. Yellow Yellow Queen
YELLOW	P	Goldenrod Highlander Yel. Valencia Omega Yel. Galaxy	Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Brigadoon Yellow Shasta
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Yolanda Apr. Valencia Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece
PINK	S		Thanks. Pink	Ind. Pink Dk. Orchid Queen Orchid Queen
PANE	P	Has. Pink Valencia Dark Valencia	Brocade Almega	Portrait Linda Lou Rose Masterpiece Taffeta

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### BLOOM APRIL 4, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Nov. 8	Nov. 29	Nov. 8 -Jan. 17	· no	11 Week
40-45°	Nov. 8	Nov. 29	Nov. 8 —Jan. 24	no	10 Week
	Nov. 8	Nov. 29	Nov. 8 —Jan. 31	no	9 Week
	Nov. 15	Dec. 13	Nov. 15—Jan. 17	no	11 Week
35-40°	Nov. 15	Dec. 13	Nov. 15-Jan. 24	no	10 Week
	Nov. 15	Dec. 13	Nov. 15-Jan. 31	no	9 Week
	Nov. 29	Dec. 27	Nov. 29-Jan. 17	no	11 Week
30-35°	Nov. 29	Dec. 27	Nov. 29—Jan. 24	no	10 Week
	Nov. 29	Dec. 27	Nov. 29—Jan. 31	no	9 Week
	Dec. 13	Jan. 3	Dec. 13—Jan. 17	no	11 Week
25-30°	Dec. 13	Jan. 3	Dec. 13-Jan, 24	no	10 Week
	Dec. 13	Jan. 3	Dec. 13—Jan. 31	no	9 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		F	1	
		11 Week	10 Week	9 Week
	S	Mefo	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace
WHITE	P	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Illini Igloo Shasta Little America Pacesetter	Keepsake Halo Silver Cloud
YELLOW	S	Cream Mefo Yellow Mefo Harvester	Ind. Yellow Imp. Ind. Yellow	Gold Lace Yellow Lace Good News
	P	Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Mary L. Hall Sunray
	S		Ind. Bronze	Detroit News Nomago
BRONZE & RED	P	Shalimar Thelma	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece	Gaiety Buckskin Buccaneer
	s		Ind. Pink Dk. Orchid Queen Orchid Queen	
PINK	P	Almega	Portrait Linda Lou Rose Masterpiece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow

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### BLOOM APRIL 11, 1955

Latitude	Plan	nt	Pinc	h*	Lig	hting Period	d	Start Shade	Respo	nse Group
	Nov.	15	Dec.	6	Nov.	15-Jan.	24	Mar. 14	11	Week
40-45°	Nov.	15	Dec.	6	Nov.	15-Jan.	31	no	10	Week
	Nov.	15	Dec.	6	Nov.	15—Feb.	7	no	9	Week
	Nov.	22	Dec.	20	Nov.	22—Jan.	24	Mar. 14	11	Week
35-40°	Nov.	22	Dec.	20	Nov.	22-Jan.	31	no	11	Week
	Nov.	22	Dec.	20	Nov.	22—Feb.	7	no	. 9	Week
	Dec.	6	Jan.	3	Dec.	6 —Jan.	24	Mar. 14	11	Week
30-35°	Dec.	6	Jan.	3	Dec.	6 —Jan.	31	no	10	Week
	Dec.	6	Jan.	3	Dec.	6 —Feb.	7	no	9	Week
	Dec.	20	Jan.	10	Dec.	20—Jan.	24	Mar. 14	11	Week
25-30°	Dec.	20	Jan.	10	Dec.	20-Jan.	31	no	10	Week
	Dec.	20	Jan.	10	Dec.	20—Feb.	7	no	. 9	Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		11 Week	10 Week	9 Week
	S	Mefo	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace
WHITE	P	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Illini Igloo Shasta Little America Pacesetter	Keepsake Halo Silver Cloud
	S	Cream Mefo Yellow Mefo Harvester	Ind. Yellow Imp. Ind. Yellow	Gold Lace Yellow Lace Good News
rellow	P	Lollipop Pippin Yel. Paramount	Barcarole Orange Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Mary L. Hall Sunray
	S		Ind. Bronze	Detroit News Nomago
BRONZE & RED	P	Shalimar Thelma	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece	Gaiety Buckskin Buccaneer
	S		Ind. Pink Dk. Orchid Queen Orchid Queen	
PINK	P	Almega	Portrait Linda Lou Rose Masterpiece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow

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# Gloeckner To EEEE Thysanthemin Manual To

### Year-Around Chrysanthemum Flowering Schedule

### BLOOM APRIL 18, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Nov. 22	Dec. 20	Nov. 22-Jan. 31	Mar. 14	11 Week
40-45°	Nov. 22	Dec. 20	Nov. 22–Feb. 7	Mar. 21	10 Week
	Nov. 22	Dec. 20	Nov. 22-Feb. 14	Mar. 28	9 Week
	Dec. 6	Jan. 3	Dec. 6 —Jan. 31	Mar. 14	11 Week
35-40°	Dec. 6	Jan. 3	Dec. 6 —Feb. 7	Mar. 21	10 Week
	Dec. 6	Jan. 3	Dec. 6 —Feb. 14	Mar. 28	9 Week
	Dec. 13	Jan. 10	Dec. 13—Feb. 7	Mar. 21	10 Week
30-35°	Dec. 13	Jan. 10	Dec. 13-Feb. 14	Mar. 28	9 Week
	Dec. 13	Jan. 10	Dec. 13—Feb. 21	no	8 Week
	Dec. 27	Jan. 17	Dec. 27—Feb. 7	Mar. 21	10 Week
25-30°	Dec. 27	Jan. 17	Dec. 27-Feb. 14	Mar. 28	9 Week
	Dec. 27	Jan. 17	Dec. 27—Feb. 21	no	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		11 Week	10 Week	9 Week	8 Week
	S	Meto	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Pacesetter Illini Igloo Shasta Little America	Keepsake Halo Silver Cloud	Pristine
	s	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
FELLOW	P	Lollipop Pippin Yel. Paramount	Barcarole Or. Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Mary L. Hall Sunray	Creampuff
	S		Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Shalimar Thelma	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece	Gaiety Buckskin Buccaneer	James Stewart Talisman
	s		Ind. Pink Dk. Orchid Queen Orchid Queen		
PINK	P	Almega	Portrait Linda Lou Rose Masterpiece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthu

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### BLOOM APRIL 25, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Nov. 29	Dec. 27	Nov. 29-Feb. 7	Mar. 14	11 Week
40-45°	Nov. 29	Dec. 27	Nov. 29-Feb. 14	Mar. 21	10 Week
	Nov. 29	Dec. 27	Nov. 29-Feb. 21	Mar. 28	9 Week
	Dec. 13	Jan. 10	Dec. 13-Feb. 7	Mar. 14	11 Week
35-40°	Dec. 13	Jan. 10	Dec. 13-Feb. 14	Mar. 21	10 Week
	Dec. 13	Jan. 10	Dec. 13—Feb. 21	Mar. 28	9 Week
	Dec. 20	Jan. 17	Dec. 20-Feb. 14	Mar. 21	10 Week
30-35°	Dec. 20	Jan. 17	Dec. 20-Feb. 21	Mar. 28	9 Week
	Dec. 20	Jan. 17	Dec. 20-Feb. 28	Apr. 4	8 Week
	Jan. 3	Jan. 24	Jan. 3 —Feb. 14	Mar. 21	10 Week
25-30°	Jan. 3	Jan. 24	Jan. 3 —Feb. 21	Mar. 28	9 Week
	Jan. 3	Jan. 24	Jan. 3 —Feb. 28	Apr. 4	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		11. Week	10 Week	9 Week	8 Week
	S	Mefo-	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Sculpture Highbrow Priscilla Paramount Belray	Whitetop Pacesetter Illini Igloo Shasta Little America	Keepsake Halo Silver Cloud	Pristine
	S	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Lollipop Pippin Yel. Paramount	Barcarole Or. Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Mary L. Hall Sunray	Creampuff
	S		Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Shalimar Thelma	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece	Gaiety Buckskin Buccaneer	James Stewart Talisman
	S		Ind. Pink. Dk. Orchid Queen Orchid Queen		
PINK	P	Almega	Portrait Linda Lou Rose Masterpiece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthu

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### BLOOM MAY 2, 1955

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Dec. 13	Jan. 10	Dec. 13-Feb. 21	Mar. 21	10 Week
40-45°	Dec. 13	Jan. 10	Dec. 13-Feb. 28	Mar. 28	9 Week
	Dec. 13	Jan. 10	Dec. 13—Mar. 7	Apr. 4	8 Week
	Dec. 20	Jan. 17	Dec. 20-Feb. 21	Mar. 21	10 Week
35-40°	Dec. 20	Jan. 17	Dec. 20-Feb. 28	Mar. 28	9 Week
	Dec. 20	Jan. 17	Dec. 20-Mar. 7	Apr. 4	8 Week
	Dec. 27	Jan. 24	Dec. 27-Feb. 21	Mar. 21	10 Week
30-35°	Dec. 27	Jan. 24	Dec. 27-Feb. 28	Mar. 28	9 Week
	Dec. 27	Jan. 24	Dec. 27—Mar. 7	Apr. 4	8 Week
	Jan. 10	Jan. 31	Jan. 10—Feb. 21	Mar. 21	10 Week
25-30°	Jan. 10	Jan. 31	Jan. 10—Feb. 28	Mar. 28	9 Week
	Jan. 10	Jan. 31	Jan. 10-Mar. 7	Apr. 4	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		10 Week	9 Week	8 Week
	S	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Freedom Whitetop Pacesetter Illini Igloo Shasta Little America Madonna Illini Snowdrift	White Popcorn Keepsake Pinocchio Halo Silver Cloud	Pristine
YELLOW	S	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampuff
	s	Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece Cadet	Gaiety Buckskin Buccaneer	James Stewart Talisman
	s	Ind. Pink Dk. Orchid Queen Orchid Queen		
PINK	P	Portrait Dk. Linda Lou Rose Masterpiece Taffeta Nobility	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthur

### **BLOOM MAY 9, 1955**

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Dec. 20	Jan. 17	Dec. 20-Feb. 28	Mar. 21	10 Week
40-45°	Dec. 20	Jan. 17	Dec. 20-Mar. 7	Mar. 28	9 Week
40 40	Dec. 20	Jan. 17	Dec. 20—Mar. 14	Apr. 4	8 Week
	Dec. 27	Jan. 24	Dec. 27—Feb. 28	Mar. 21	10 Week
35-40°	Dec. 27	Jan. 24	Dec. 27—Mar. 7	Mar. 28	9 Week
	Dec. 27	Jan. 24	Dec. 27—Mar. 14	Apr. 4	8 Week
	Jan. 3	Jan. 31	Jan. 3 —Feb. 28	Mar. 21	10 Week
30-35°	Jan. 3	Jan. 31	Jan. 3Mar. 7	Mar. 28	9 Week
	Jan. 3	Jan. 31	Jan. 3 —Mar. 14	Apr. 4	8 Week
	Jan. 17	Feb. 7	Jan. 17—Feb. 28	Mar. 21	10 Week
25-30°	Jan. 17	Feb. 7	Jan. 17—Mar. 7	Mar. 28	9 Week
20-00	Jan. 17	Feb. 7	Jan. 17—Mar. 14	Apr. 4	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		10 Week	9 Week	8 Week
	s	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	p	Freedom Whitetop Pacesetter Illini Igloo Shasta Little America Madonna Illini Snowdrift	White Popcorn Keepsake Pinocchio Halo Silver Cloud	Pristine
	s	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampuff
	S	Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece Cadet	Gaiety Buckskin Buccaneer	James Stewart Talisman
	s	Ind. Pink Dk. Orchid Queen Orchid Queen	:	٠
PINK	P	Portrait Dk. Linda Lou Rose Masterpiece Taffeta Nobility	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthur

B	L	O O	M	MA	Y	17,	1 9	54
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Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Jan. 4	Feb. 1	Jan. 4 —Mar. 8	Mar. 22	10 Week
40-45°	Jan. 4	Feb. 1	Jan. 4 —Mar. 15	Mar. 29	9 Week
	Jan. 4	Feb. 1	Jan. 4 —Mar. 22	Apr. 5	8 Week
	Jan. 11	Feb. 8	Jan. 11Mar. 8	Mar. 22	10 Week
35-40°	Jan. 11	Feb. 8	Jan. 11—Mar. 15	Mar. 29	9 Week
	Jan. 11	Feb. 8	Jan. 11Mar. 22	Apr. 5	8 Week
	Jan. 25	Feb. 15	Jan. 25—Mar. 8	Mar. 22	10 Week
25-35°	Jan. 25	Feb. 15	Jan. 25—Mar. 15	Mar. 29	9 Week
	Jan. 25	Feb. 15	Jan. 25—Mar. 22	Apr. 5	8 Week
		BLOOM M	AY 24, 1954		
	Jan. 11	Feb. 8	Jan. 11—Mar. 15	Mar. 22	10 Week
40-45°	Jan. 11	Feb. 8	Jan. 11—Mar. 22	Mar. 29	9 Week
	Jan. 11	Feb. 8	Jan. 11—Mar. 29	Apr. 5	8 Week
	Jan. 18	Feb. 15	Jan, 18—Mar. 15	Mar. 22	10 Week
35-40°	Jan. 18	Feb. 15	Jan. 18-Mar. 22	Mar. 29	9 Week
	Jan. 18	Feb. 15	Jan. 18—Mar. 29	Apr. 5	8 Week
	Feb. 1	Feb. 22	Feb. 1 —Mar. 15	Mar. 22	10 Week
25-35°	Feb. 1	Feb. 22	Feb. 1 —Mar. 22	Mar. 29	9 Week
20 00	Feb. 1	Feb. 22	Feb. 1 —Mar. 29	Apr. 5	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		10 Week	9 Week	8 Week
	s	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Freedom Whitetop White Mensa Pacesetter Illini Igloo Shasta Little America Madonna Illini Snowdrift	White Popcorn Keepsake Pinocchio Halo Silver Cloud	Pristine
	s	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasta	Starlight Golden Herald Gold Coast Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampufi
	S	Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece Cadet	Gaiety Buckskin Buccaneer	James Stewart Talisman
	S	Ind. Pink Dk. Orchid Queen	Mary Garden	
PINK	P	Portrait Dk. Linda Lou Rose Masterpiece Taffeta Nobility	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthu

			,		
Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Jan. 25	Feb. 22	Jan. 25-Mar. 22	Mar. 22	10 Week
40-45°	Jan. 25	Feb. 22	Jan. 25—Mar. 29	Mar. 29	9 Week
	Jan. 25	Feb. 22	Jan. 25—Apr. 5	Apr. 5	8 Week
	Feb. 8	Mar. 1	Feb. 8 —Mar. 22	Mar. 22	10 Week
25-40°	Feb. 8	Mar. 1	Feb. 8 —Mar. 29	Mar. 29	9 Week
	Feb. 8	Mar. 1	Feb. 8 -Apr. 5	Apr. 5	8 Week
		BLOOM JU	UNE 7, 1954		
	Feb. 1	Mar. 1	Feb. 1Mar. 29	Mar. 29	10 Week
40-45°	Feb. 1	Mar. 1	Feb. 1 -Apr. 5	Apr. 5	9 Week
	Feb. 1	Mar. 1	Feb. 1 —Apr. 12	Apr. 12	8 Week
	Feb. 15	Mar. 8	Feb. 15—Mar. 29	Mar. 29	10 Week
25-40°	Feb. 15	Mar. 8	Feb. 15-Apr. 5	Apr. 5	9 Week
	Feb. 15	Mar. 8	Feb. 15-Apr. 12	Apr. 12	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

		10 Week	9 Week	8 Week
	S	Ind. White Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Freedom Whitetop White Mensa Pacesefter Illini Igloo Shasta Little America Madonna Illini Snowdrift	White Popcorn Keepsake Pinocchio Halo Silver Cloud	Pristine
	s	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasta	Starlight Golden Herald Gold Coast Sunup Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampuff
	S	Ind. Bronze	Detroit News Nomago	
BRONZE & RED	P	Beauregard Rubicon Chevron Br. Linda Lou Dk. Br. Masterpiece Cadet	Gaiety Buckskin Buccaneer	James Stewart Talisman
	S	Ind. Pink Dk. Orchid Queen	Mary Garden	•
PINK	P	Portrait Dk. Linda Lou Rose Masterpiece Taffeta Nobility	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthur



### **BLOOM JUNE 14, 1954**

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Feb. 22	Mar. 15	Feb. 22-Apr. 5	Apr. 5	10 Week
25-45°	Feb. 22	Mar. 15	Feb. 22-Apr. 12	Apr. 12	9 Week
	Feb. 22	Mar. 15	Feb. 22-Apr. 19	Apr. 19	8 Week
		BLOOM J	UNE 21, 1954		
	Mar. 1	Mar. 22	Mar. 1 —Apr. 12	Apr. 12	10 Week
25-45°	Mar. 1	Mar. 22	Mar. 1 —Apr. 19	Apr. 19	9 Week
	Mar. 1	Mar. 22	Mar. 1 —Apr. 26	Apr. 26	8 Week
		BLOOM J	UNE 28, 1954		
	Mar. 8	Mar. 29	Mar. 8 —Apr. 19	Apr. 19	10 Week
25-45°	Mar. 8	Mgr. 29	Mar. 8 —Apr. 26	Apr. 26	9 Week
	Mar. 8	Mar. 29	Mar. 8 — May 3	May 3	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

### VARIETIES IN RESPONSE GROUPS

		10 Week	9 Week	8 Week
	S	Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace Albatross	Silver Sheen
WHITE	P	Freedom Whitetop Madonna White Mensa Pacesetter Illini Igloo Shasta Illini Snowdrift	White Popcorn Keepsake Pinocchio Songster Halo Silver Cloud	Pristine
	s	Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasta	Starlight Golden Herald Gold Coast Sunup Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampuff
BRONZE & RED	P	Beauregard Cadet	Gaiety Buckskin	James Stewart Talisman
PINK	P	Portrait Dk. Linda Lou	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthur

S-Standard

P-Pompon



### BLOOM JULY 5, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Mar. 15	Apr. 5	Mar. 15-Apr. 26	Apr. 26	10 Week
25-45°	Mar. 15	Apr. 5	Mar. 15—May 3	May 3	9 Week
	Mar. 15	Apr. 5	Mar. 15—May 10	May 10	8 Week
		BLOOM J	ULY 12, 1954		
	Mar. 22	Apr. 12	Mar. 22—May 3	May 3	10 Week
25-45°	Mar. 22	Apr. 12	Mar. 22-May 10	May 10	9 Week
	Mar. 22	Apr. 12	Mar. 22—May 17	May 17	8 Week
		BLOOM J	ULY 19, 1954		
	Mar. 29	Apr. 19	Mar. 29-May 10	May 10	10 Week
25-45°	Mar. 29	Apr. 19	Mar. 29—May 17	May 17	9 Week
	Mar. 29	Apr. 19	Mar. 29-May 24	May 24	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		10 Week	9 Week	8 Week
	S	Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace Albatross	Silver Sheen
WHITE	P	Freedom Whitetop Madonna White Mensa Pacesetter Shasta Illini Snowdrift	White Popcorn Keepsake Pinocchio Songster Halo Silver Cloud	Pristine
YELLOW	s	Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
	P	Barcarole Crescendo Orange Beauregard Golden Mensa Yellow Shasia	Starlight Golden Herald Gold Coast Sunup Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray	Creampuff
BRONZE & RED	P	Beauregard Cadet	Buckskin	James Stewart Talisman
PINK	P	Dk. Linda Lou Portrait	Reward Pink Dot Rainbow	Mayfair Mirth Mary McArthur

S-Standard

P-Pompon



### **BLOOM JULY 26, 1954**

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Apr. 5	Apr. 26	Apr. 5 -May 10	May 17	10 Week
25-45°	Apr. 5	Apr. 26	Apr. 5 —May 17	May 24	9 Week
	Apr. 5	Apr. 26	Apr. 5 —May 24	May 31	8 Week
		BLOOM AU	IGUST 2, 1954		
	Apr. 12	May 3	Apr. 12-May 10	May 24	10 Week
25-45°	Apr. 12	May 3	Apr. 12—May 17	May 31	9 Week
25-45	Apr. 12	May 3	Apr. 12-May 24	June 7	8 Week
		BLOOM AU	GUST 9, 1954		
	Apr. 19	May 10	Apr. 19-May 10	May 31	10 Week
25-45°	Apr. 19	May 10	Apr. 19-May 17	June 7	9 Week
40-40	Apr. 19	May 10	Apr. 19-May 24	June 14	8 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		10 Week	9 Week	8 Week
	S	Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Freedom Whitetop Madonna Pacesetter Shasta Illini Snowdrift	White Popcorn Keepsake Songster Halo Silver Cloud	Pristine
	S	Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Sunup Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray	Creampuff
BRONZE & RED	P	Beauregard Cadet	Buckskin	James Stewart Talisman
PINK	P	Dk. Linda Lou	Reward Pink Dot Rainbow	Mayfair Mirth Mary McArthur

S-Standard

P---Pompon



### BLOOM AUGUST 16, 1954

Plant	Pinch*	Lighting Period	Start Shade	Response Group
Apr. 26	May 17	Apr. 26-May 10	June 7	10 Week
Apr. 26	May 17	Apr. 26—May 17	June 14	9 Week
Apr. 26	May 17	Apr. 26—May 24	June 21	8 Week
	BLOOM AU	GUST 23, 1954		.,
May 3	May 24	May 3 —May 10	June 24	10 Week
May 3	May 24	May 3 -May 17	June 21	9 Week
May 3	May 24	May 3 —May 24	June 28	8 Week
	BLOOM AU	GUST 30, 1954		
May 10	May 31	No Light Necessary	June 21	10 Week
May 10	May 31		June 28	9 Week
May 10	May 31	No Light Necessary	July 5	8 Week
	Apr. 26 Apr. 26 Apr. 26 May 3 May 3 May 3	Apr. 26 May 17 Apr. 26 May 17 Apr. 26 May 17  BLOOM AU  May 3 May 24 May 3 May 24 May 3 May 24 May 3 May 24  May 10 May 31 May 10 May 31 May 10 May 31	Apr. 26 Apr. 27 Apr. 26 Apr. 27 Apr. 2	Apr. 26 Apr. 2

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		10 Week	9 Week	8 Week
a.	s	Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Freedom Whitetop Madonna Pacesetter Shasta Illini Snowdrift	White Popcorn Keepsake Songster Halo Silver Cloud	Pristine
	s	Yellow Queen	Gold Lace Yellow Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Orange Beauregard Yellow Shasta	Starlight Golden Herald Gold Coast Sunup Aztec Sauterne Yellow Halo Mary L. Hall Starbright Sunray Honeymoon	Creampuff
BRONZE & RED	P	Beauregard Cadet	Gaiety Buckskin	James Stewart Talisman
PINK	P	Portrait Dk. Linda Lou	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthu

S-Standard

P---Pompon



### BLOOM SEPTEMBER 6, 1954

Plant	Pinch*	Start Shade	Response Group
May 17	June 7	June 28	10 Week
May 17	June 7	July 5	9 Week
May 17	June 7	July 12	8 Week
BLOOM	M SEPTEMBER	13, 1954	
May 24	June 14	July 5	10 Week
	June 14	July 12	9 Week
May 24	June 14	July 19	8 Week
BLOOM	M SEPTEMBER	20, 1954	
May 31	June 21	July 12	10 Week
*			9 Week
May 31	June 21	July 26	8 Week
June 7	June 28	July 12	10 Week
	June 28		9 Week
June 7	June 28	July 26	8 Week
	May 17 May 17 May 17  BLOOM  May 24 May 24 May 24 May 31 May 31 May 31 May 31 June 7 June 7	May 17 May 17 May 17 June 7 May 17 June 7  BLOOM SEPTEMBER  May 24 May 24 June 14 May 24 June 14 May 24 June 14  BLOOM SEPTEMBER  May 31 June 21 May 31 June 21 May 31 June 21 June 7 June 7 June 28 June 28	May 17 May 17 May 17 June 7 July 5 May 17 June 7 July 12  BLOOM SEPTEMBER 13, 1954  May 24 June 14 July 5 May 24 June 14 July 12 May 24 June 14 July 19  BLOOM SEPTEMBER 20, 1954  May 31 June 21 July 12 May 31 June 21 July 19 May 31 June 21 July 19 May 31 June 21 July 19 July 26  June 7 June 28 July 12 June 7 June 28 July 12 July 19

\*For No Pinch Method: Plant on Pinch Date

		10 Week	Week	B Week
	S	Ind. White Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
HITE	P	Freedom Whitetop Encore Pacesetter Illini Igloo Shasta Little America Illini Snowdrift	White Popcorn Keepsake Pinocchio Songster Halo (Ghs.) Sea Gull Silver Cloud (Ghs.)	Pristine
	s	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Barcarole Crescendo Brigadoon Constellation Pixie Yellow Shasta Orange Beauregard	Starlight Gold Coast Aztec Sauterne Yellow Halo (Ghs.) Sch. Yellow Daisy Mary L. Hall Sunray Honeymoon	Creampuff
	s	Ind. Bronze Nomago Mrs. Roy	Detroit News	
BRONZE & RED	P	Beauregard Rubicon Samovar Bittersweet Paragon	Gaiefy Bronze Dof Buckskin Buccaneer Navaho Imp. Red Daisy	James Stewart Talisman
	S	Ind. Pink Dk. Orchid Queen	Mary Garden	
PINK	P	Portraif Dark Bulkeley Cover Girl Nobility Rose Masterpiece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthus



### BLOOM SEPTEMBER 27, 1954

Latitude	Plan	nt	Pinc	h*	Start	Shade	Respon	nse Grou
	June	7	June	28	July	19	10	Week
40-45°	June	7	June	28	July	26	9	Week
	June	7	June	28	Aug.		. 8	Week
	June	14	July	5	July	19	10	Week
25-40°	June	14	July	5	July	26	9	Week
	June	14	July	25	Aug.	2	8	Week
		BLOO	м осто	BER	4, 1954			
	June	14 .	July	5	July	19	11	Week
40-45°	June	14	July	5 .	July	26	10	Week
	June	14	July	5	Aug.		9	Week
	June	21	July	12	July	19	11	Week
25-40°	June	21	July	12	July	26	10	Week
	June	21	July		Aug.		. 9	Week

<sup>\*</sup>For No Pinch Method: Plant on Pinch Date

		11 Week	10 Week	9 Week	8 Week
	S	Mefo	Ind. White Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace	Silver Sheen
WHITE	P	Sculpture Highbrow Priscilia Paramount Belray	Freedom Whitetop Encore Pacesetter Illini Igloo Shasta Little America Illini Snowdrift	White Popcorn Keepsake Pinocchio Songster Halo (Ghs.) Sea Gull Silv. Cloud (Ghs.)	Pristine
	S	Yellow Melo Cream Melo	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News	Blazing Gold
YELLOW	P	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Crescendo Brigadoon Constellation Pixie Yellow Shasta Or. Beauregard	Starlight Gold Coast Aztec Sauterne Yel. Halo (Ghs.) Sch. Yel. Daisy Mary L. Hall Sunray Honeymoon	Creampuff
	S		Ind. Bronze Nomago Mrs. Roy	Detroit News	
BRONZE & RED	P	Shalimar Thelma Rusticon Festival Br. Minuef	Beauregard Rubicon Samovar Bittersweet Paragon	Gaiety Bronze Dot Buckskin Buccaneer Navaho Imp. Red Daisy	James Stewart Talisman
	S	Thanks. Pink	Ind. Pink Dk. Or. Queen	Mary Garden	
PINK	P	Brocade Minuet Almega Evening Star	Portrait Dark Bulkeley Cover Girl Nobility Rose Mast'p'ce Taffela	Pinkette Reward Pink Dot Bluechip Rainbow	Mayfair Mirth Mary McArthur



	1	BLOOM	OCTOBER	11, 195	4	
Latitude	Plant		Pinch*	Start	Shade	Response Group
	June 14	4	July 5	July	26	11 Week
40-45°	June 14	4	July 5	Aug		10 Week
	June 14	4	July 5	Aug		9 Week
	June 21	1	July 12	July	26	11 Week
25-40°	June 2	1	July 12	Aug		10 Week
	June 2		July 12	Aug		9 Week
		BLOOM	OCTOBER	18, 195	4	
	June 2	1	July 12	Aug	. 2	11 Week
40-45°	June 2	1	July 12	Aug		10 Week
	June 2		July 12	Aug		9 Week
	June 2	8	July 19	Aug	. 2	11 Week
25-40°	June 28		July 19	Aug	. 9	10 Week
	June 28		July 19	Aug		9 Week

<sup>\*</sup>For No Pinch Method: Plant on Pinch Date

		11 Week	10 Week	9 Week
	s	Mefo	Ind. White Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace
VHITE	P	Sculpture Highbrow Priscilla Paramount Belray	Freedom Whitetop Encore Pacesetter Illini Igloo Shasta Little America Illini Snowdrift	White Popcorn Keepsake Songster Halo (Ghs.) Sea Gull Silver Cloud (Ghs.)
	S	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News
YELLOW	P	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Crescendo Brigadoon Constellation Pixie Yellow Shasta Orange Beauregard	Starlight Gold Coast Aztec Sch. Yellow Daisy Mary L. Hall Sunray Honeymoon
	S		Ind. Bronze Nomago Mrs. Roy	Detroit News
RONZE RED	P	Shalimar Thelma Rusticon Festival Br. Minuet Illini Redhead	Beauregard Rubicon Samovar Biffersweef Paragon	Gaiefy Bronze Dot Buckskin Buccaneer Navaho Imp. Red Daisy
	S	Thanks. Pink	Ind. Pink Dk. Orchid Queen	Mary Garden
PINK	P	Brocade Minuet Carole Polka Nugano Almega Illini Formal	Portrait Dark Bulkeley Cover Girl Nobility Rose Masterpiece Taffela	Pinkette Reward Pink Dot Bluechip Rainbow

### BLOOM OCTOBER 25, 1954

Latitude	Plant	Pinch*	Start Shade	Response Group
	June 28	July 19	Aug. 2	12 Week
40-45°	June 28	July 19	Aug. 9	11 Week
40-43	June 28	July 19	Aug. 16	10 Week
	June 28	July 19	No	9 Week
	July 5	July 26	Aug. 2	12 Week
25-40°	July 5	July 26	Aug. 9	11 Week
25-40°	July 5	July 26	Aug. 16	10 Week
	July 5	July 26	No	9 Week
	BLOOM	NOVEMBER	1, 1954	
	June 28	July 19	Aug. 9	12 Week
40-45°	June 28	July 19	Aug. 16	11 Week
	June 28	July 19	No	10 Week
	July 5	July 26	Aug. 9	12 Week
25-40°	July 5	July 26	Aug. 16	11 Week
20-40	3019 3			

\*For No Pinch Method: Plant on Pinch Date

		12 Week	31 Week	10 Week	9 Week
WHITE	S	Chattanooga	Melo	Ind. White Giant Betsy Ross Jean Elizabeth Crystal Queen	Queen's Lace
	P	White Valencia Fortune	Sculpture Highbrow Priscilla Paramount Belray	Freedom Whitetop Encore Pacesetter Illini Igloo Shasta Little America Illini Snowdrift	White Popcorn Keepsake Songster Halo (Ghs.) Sea Gull
YELLOW	s	Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen	Gold Lace Yellow Lace Good News
	P	Goldenrod Goldsmith Highlander Yel. Valencia Yel. Fortune Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Crescendo Brigadoon Constellation Pixie Yellow Shasta Or. Beauregard	Starlight Gold Coast Aztec Sch. Yel. Daisy Mary L. Hall Sunray Honeymoon
BRONZE & RED	s	Oak Leaf	· · · · · · · · · · · · · · · · · · ·	Ind. Bronze Nomago Mrs. Roy	Detroit News
	P	Illini Redwood Br. Goldsmith Indian Head Apr. Valencia Galaxy	Shalimar Thelma Rusticon Festival Br. Minuet Illini Redhead	Beauregard Rubicon Samovar Biffersweet Paragon	Gaiety Bronze Dot Buckskin Buccaneer Navaho Imp. Red Daisy
PINK	s		Thanks. Pink	Ind. Pink Dk. Or. Queen	Mary Garden
	P	Hasegawa Pink Pink Cloud Valencia Dark Valencia	Brocade Minuet Carole Polka Nugano Almega Illini Formal	Portrait Dark Bulkeley Cover Girl Nobility Rose Mast'piece Taffeta	Pinkette Reward Pink Dot Bluechip Rainbow



### **BLOOM NOVEMBER 8, 1954**

Latitude	Plant	Pinch*	Start Shade	Response Group
	July 5	July 26	Aug. 16	12 Week
40-45°	July 5	July 26	Aug. 23	11 Week
	July 5	July 26	No	10 Week
	July 12	Aug. 2	Aug. 16	12 Week
30-40°	July 12	Aug. 2	Aug. 23	11 Week
	July 12	Aug. 2	No	10 Week
	July 19	Aug. 9	Aug. 16	12 Week
25-30°	July 19	Aug. 9	Aug. 23	11 Week
	July 19	Aug. 9	No	10 Week

\*For No Pinch Method: Plant on Pinch Date

		12 Week	11 Week	10 Week
	S	Chaffanooga	Mefo	Giant Betsy Ross Ind. White Jean Elizabeth Crystal Queen
WHITE	P	White Valencia Fortune	Sculpture Highbrow Priscilla Paramount Belray	Freedom Whitetop Encore Pacesetter Illini Igloo Shasta Little America Illini Snowdrift
	S	Golden Pearson Yel. Chattanooga Dk. Yel. Chattanooga	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Goldenrod Goldsmith Highlander Yel Valencia Yel. Fortune Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Paramount	Barcarole Crescendo Brigadoon Constellation Pixie Yellow Shasta Orange Beauregard
	s	Oak Leaf		Ind. Bronze Nomago Mrs. Roy
BRONZE & RED	P	Illini Redwood Br. Goldsmith Indian Head Apr. Valencia Galaxy	Shalimar Thelma Rusticon Festival Br. Minuet Illini Redhead	Beauregard Rubicon Samovar Bittersweet Paragon
	s		Thanks. Pink	Ind. Pink Dk. Orchid Queen
PINK	P	Hasegawa Pink Pink Cloud Valencia Dark Valc <i>n</i> cia	Brocade Minuet Carole Polka Nugano Almega Illini Formal	Portrait Dark Bulkeley Cover Girl Nobility Rose Masterpiece Taffeta

# Speckner To Stantification Manual Manual

### Year-Around Chrysanthemum Flowering Schedule

### BLOOM NOVEMBER 15, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
40-45°	July 12 July 12 July 12	Aug. 2 Aug. 2 Aug. 2	None Aug. 23 None No Aug. 9 — Sept. 6 No	12 Week 11 Week 10 Week	
30-40°	July 19	Aug. 9	None	Aug. 23	12 Week
	July 19	Aug. 9	None	No	11 Week
	July 19	Aug. 9	Aug. 9 —Sept. 6	No	10 Week
25-30°	July 26	Aug. 16	None	Aug. 23	12 Week
	July 26	Aug. 16	None	No	11 Week
	July 26	Aug. 16	Aug. 9 —Sept. 6	No	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		12 Week	11 Week	10 Week
WHITE	S	Chattanooga	Meio	Ind. White Crystal Queen
	P	White Valencia Fortune	Sculpture Highbrow Priscilla Paramount Belray	
	s	Golden Pearson Yel. Chattanooga Dk. Yel. Chattanooga	Yellow Meto Cream Meto Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
rellow	P	Goldenrod Goldsmith Highlander Sunnyside Yel. Valencia Yel. Fortune Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Klondike Yel. Paramounf	
	S	Oak Leaf		Ind. Bronze Br. Orchid Queen
RONZE RED	P	Illini Redwood Br. Goldsmith Indian Head Apr. Valencia Galaxy	Illini Redhead Rusticon Thelma Carousel Festival Br. Minuet	
	S	₹	Thanks. Pink	Ind. Pink Orchid Queen Dk. Orchid Queen
PINK	P	Hasegawa Pink Pink Cloud Valencia Dark Valencia	Carole Polka Nugano Almega Minuet Illini Formal	

S—Standard

P---Pompon



#### BLOOM NOVEMBER 22, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group	
	July 12	Aug. 2	None	Aug. 23	13 Week	
40-45°	July 12	Aug. 2	None	Aug. 30	12 Week	
	July 12	Aug. 2	None	No	11 Week	
	July 12	Aug. 2	Aug. 9 —Sept. 13	No	10 Week	
	July 19	Aug. 9	None	Aug. 23	13 Week	
30-40°	July 19	Aug. 9	None	Aug. 30	12 Week	
	July 19	Aug. 9	None	No	11 Week	
	July 19	Aug. 9	Aug. 9 —Sept. 13	No	10 Week	
	July 26	Aug. 16	None	Aug. 23	13 Week	
25-30°	July 26	Aug. 16	None	Aug. 30	12 Week	
	July 26	Aug. 16	None	No	11 Week	
	July 26	Aug. 16	Aug. 9 —Sept. 13	No	10 Week	

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		13 Week	12 Week	11 Week	10 Week
	S		Chattanooga Margaret Moeller	Mefo	Ind. White Crystal Queen
WHITE	P	Cameo Acclaim Cotillion Carrara Yukon	White Valencia Fortune	Sculpture Highbrow Priscilla Paramount Belray	
	S		Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Meio Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Brandywine Yellow Cameo Cinderella Goldione Corsair	Goldenrod Goldsmith Highlander Sunnyside Yel. Fortune Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Klondike Yel. Paramount	
	S		Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Mahogany Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Illini Redwood Br. Goldsmith Indian Head Apr. Valencia Galaxy	Illini Redhead Rusticon Thelma Carousel Festival Br. Minuei	
	s			Thanks. Pink	Ind. Pink Orchid Queen Dk. Orchid Queen
PINK	P	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink Valencia	Carole Polka Nugano Almega Minuet Illini Formal	

S-Standard

P-Pompon

#### BLOOM NOVEMBER 29, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	July 19	Aug. 9	None	Aug. 30	13 Week
40-45°	July 19	Aug. 9	None	No	12 Week
	July 19	Aug. 9	Aug. 16-Sept. 13	No	11 Week
	July 19	Aug. 9	Aug. 9-Sept. 20	No	10 Week
	July 26	Aug. 16	None	Aug. 30	13 Week
30-40°	July 26	Aug. 16	None	No	12 Week
	July 26	Aug. 16	Aug. 16-Sept. 13	No	11 Week
	July 26	Aug. 16	Aug. 9-Sept. 20	No	10 Week
	Aug. 2	Aug. 23	None	Aug. 30	13 Week
25-30°	Aug. 2	Aug. 23	None	No	12 Week
	Aug. 2	Aug. 23	Aug. 16—Sept. 13	No	11 Week
	Aug. 2	Aug. 23	Aug. 9-Sept. 20	No	10 Week

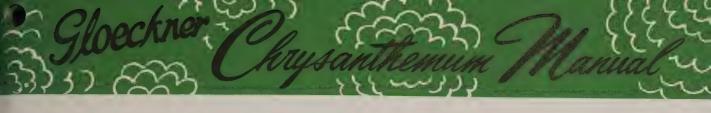
\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		13 Week	12 Week	11 Week	10 Week
	S		Chattanooga Margaret Moeller	Mefo	Ind. White Crystal Queen
WHITE	P	Cameo Acclaim Cotillion Carrara Yukon	White Velancia Fortune	Sculpture Highbrow Priscilla Paramount Belray	
	S		Golden Pearson Yel. Chattanooga Dk. Yel. Chat'n'ga	Yellow Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Brandywine Yellow Cameo Cinderella Goldfone Corsair	Goldenrod Goldsmith Highlander Sunnyside Yel. Fortune Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Klondike Yel. Paramount	
	S		Oak Leaf		Ind. Bronze Br. Orchid Queen
BRONZE & RED	P	Mahogany Viking Holiday Christ. Star Br. Minstrel Dk. Br.Minstrel	Illini Redwood Br. Goldsmith Indian Head Apr. Valencia Galaxy	Illini Redhead Rusticon Thelma Carousel Festival Br. Minuet	
	S		• :	Thanks. Pink	Ind. Pink Orchid Queen Dk. Orchid Queen
PINK	P	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink Valencia	Carole Polka Nugano Almega Minuet Illini Formal	

S—Standard

P---Pompon



#### BLOOM DECEMBER 6, 1954

Latitude	Plan	t	Pinch	3*	Lightin	ng Period	Start Shade	Respo	nse Group
	July	26	Aug.	16	Non	ne	Aug. 30	14	Week
	July	26	Aug.	16	Non	ne	No		Week
40-45°	July	26	Aug.	16	Aug. 23-	-Sept. 13	No	12	Week
	July	26	Aug.	16		-Sept. 20	No		Week
	July	26	Aug.	16		-Sept. 27	No	10	Week
	Aug.	2	Aug.	23	Non	ne	Aug. 30	14	Week
	Aug.	2	Aug.	23	Non	ne	No	13	Week
30-40°	Aug.	2	Aug.	23	Aug. 23	-Sept. 13	No	12	Week
	Aug.	2	Aug.	23	Aug. 16-	-Sept. 20	No	11	Week
	Aug.	2	Aug.	23	Aug. 9	-Sept. 27	No	1.0	Week
	Aug.	9	Aug.	30	Nor	16	No	13	Week
DF 000	Aug.	9	Aug.	30	Aug. 23-	Sept. 13	No	12	Week
25-30°	Aug.	9	Aug.	30		-Sept. 20	No	11	Week
	Aug.	9	Aug.	30	9	-Sept. 27	No	10	Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		14 Week	13 Week	12 Week	11 Week	10 Week
Si Paramanagah haki hadi	S		Dec. White Smith's White	Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Paramount Priscilla Belray	Whitetop Illini Igloo Shasta Encore Little America
	S		Chalice Tobin's Yellow Meteore	Golden Pearson Yel. Chat'n'ga Dk. Yel. Chat'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yellow Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldfone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Gold. Chord Forty-Niner Lollipop Pippin Yel. Par'm't	Barcarole Or. Beauregard Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Or. Queen
BRONZE & RED	P	Br. Riviera Topaz Christ. Greet'gs Merrymaker Poinsettia	Mah. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Br. Linda Lou
	S				Thanks. Pink	Ind. Pink Orchid Queen Dk. Or. Queen
PINK	P	Riviera Ser. Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink	Brocade Almega	Linda Lou Taffeta

S-Standard

P-Pompon



#### BLOOM DECEMBER 13, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	July 26	Aug. 16	None	Sept. 6	14 Week
	July 26	Aug. 16	None	No	13 Week
40-45°	July 26	Aug. 16	Aug. 23—Sept. 20	No	12 Week
	July 26	Aug. 16	Aug. 16-Sept. 27	No	11 Week
	July 26	Aug. 16	Aug. 9 -Oct. 4	No	10 Week
	Aug. 2	Aug. 23	None	Sept. 6	14 Week
	Aug. 2	Aug. 23	None	No	13 Week
30-40°	Aug. 2	Aug. 23	Aug. 23-Sept. 20	No	12 Week
	Aug. 2	Aug. 23	Aug. 16-Sept. 27	No	11 Week
	Aug. 2	Aug. 23	Aug. 9 Oct. 4	No	10 Week
	Aug. 9	Aug. 30	None	No	13 Week
	Aug. 9	Aug. 30	Aug. 23-Sept. 20	No	12 Week
25-30°	Aug. 9	Aug. 30	Aug. 16-Sept. 27	No	11 Week
	Aug. 9	Aug. 30	Aug. 9 Oct. 4	No	10 Week

\*For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		14 Week	13 Week	12 Week	11 Week	10 Week
	S		Dec. White Smith's White	Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carara Yukon	Monarch	Sculpture Highbrow Paramount Priscilla Belray	Whitetop Illini Igloo Shasta Encore Little America
	S		Chalice Tobin's Yellow Meteore	Golden Pearson Yel. Chai'n'ga Dk. Yel. Chai'n'ga	Yellow Meio Cream Meio Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Par'm't	Barcarole Or. Beauregard Yellow Shasta
	S			Oak Leaf		Ind. Bronze Br. Or. Queen
BRONZE & RED	P	Br. Riviera Topaz Christ. Greet'gs Merrymaker Poinsettia	Mah. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beaugregard Rubicon Br. Linda Lou
	S				Thanks. Pink	Ind. Pink Orchid Queen Dk. Or. Queen
PINK	P	Riviera Ser. Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink	Brocade Almega	Linda Lou Taffeta

S-Standard

P-Pompon

# Manual Manual

# Year-Around Chrysanthemum Flowering Schedule

#### BLOOM DECEMBER 20, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 2	Aug. 23	None	No	14 Week
	Aug. 2	Aug. 23	Aug. 30-Sept. 20	No	13 Week
40-45°	Aug. 2	Aug. 23	Aug. 23-Sept. 27	No	12 Week
40-40	Aug. 2	Aug. 23	Aug. 16-Oct. 4	No	11 Week
	Aug. 2	Aug. 23	Aug. 9 -Oct. 11	No	10 Week
	Aug. 9	Aug. 30	None	No	14 Week
	Aug. 9	Aug. 30	Aug. 30-Sept. 20	No	13 Week
35-40°	Aug. 9	Aug. 30	Aug. 23-Sept. 27	No	12 Week
	Aug. 9	Aug. 30	Aug. 16-Oct. 4	No	11 Week
	Aug. 9	Aug. 30	Aug. 16-Oct. 11	No	10 Week
	Aug. 16	Sept. 6	None	No	14 Week
	Aug. 16	Sept. 6	Aug. 30-Sept. 20	No	13 Week
30-35°	Aug. 16	Sept. 6	Aug. 23-Sept. 27	No	12 Week
00-00	Aug. 16	Sept. 6	Aug. 23-Oct. 4	No	11 Week
	Aug. 16	Sept. 6	Aug. 23-Oct. 11	No	10 Week
	Aug. 23	Sept. 13	Aug. 30-Sept. 20	No	13 Week
	Aug. 23	Sept. 13	Aug. 30-Sept. 27	No	12 Week
25-30°	Aug. 23	Sept. 13	Aug. 30—Oct. 4	No	11 Week
	Aug. 23	Sept. 13	Aug. 30-Oct. 11	No	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		14 Week	13 Week	12 Week	11 Week	10 Week
	S		Dec. White Smith's White	Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Paramount Priscilla Belray	Whitetop Illini Igloo Shasta Encore Little America
	S		Chalice Tobin's Yellow Meteore	Golden Pearson Yel. Chai'n'ga Dk. Yel. Chai'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldfone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Golden Chord Forty-Niner Lollipop Pippin Yel. Par'm't	Barcarole Or. Beauregard Yellow Shasta
	S			Oak Leaf		Ind. Bronze
BRONZE & RED	P	Br. Riviera Topaz Christ. Greet'gs Merrymaker Poinsettia	Mah. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Rubicon Br. Or. Queen Br. Linda Lou
	S				Thanks. Pink	Ind. Pink Orchid Queen Dk. Or. Queen
PINK	P	Riviera Ser. Riviera Roselind	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink	Brocade Almega	Linda Lou Taffeta

#### BLOOM DECEMBER 27, 1954

Latitude	Plant	Pinch*	Lighting Period	Start Shade	Response Group
	Aug. 9	Aug. 30	None	No	15 Week
	Aug. 9	Aug. 30	Sept. 6 —Sept. 20	No	14 Week
40.450	Aug. 9	Aug. 30	Aug. 30-Sept. 27	No	13 Week
40-45°	Aug. 9	Aug. 30	Aug. 23-Oct. 4	No	12 Week
	Aug. 9	Aug. 30	Aug. 16-Oct. 11	No	11 Week
	Aug. 9	Aug. 30	Aug. 9 —Oct. 18	No	10 Week
	Aug. 16	Sept. 6	None	No	15 Week
	Aug. 16	Sept. 6	Sept. 6 -Sept. 20	No	14 Week
05 400	Aug. 16	Sept. 6	Aug. 30-Sept. 27	No	13 Week
35-40°	Aug. 16	Sept. 6	Aug. 23-Oct. 4	No	12 Week
	Aug. 16	Sept. 6	Aug. 16-Oct. 11	No	11 Week
	Aug. 16	Sept. 6	Aug. 16-Oct. 18	No	10 Week
	Aug. 30	Sept. 20	Aug. 30-Sept. 27	No	13 Week
00.050	Aug. 30	Sept. 20	Aug. 30-Oct. 4	No	12 Week
30-35°	Aug. 30	Sept. 20	Aug. 30-Oct. 11	No.	11 Week
	Aug. 30	Sept. 20	Aug. 30-Oct. 18	No	10 Week
	Sept. 6	Sept. 27	Sept. 6 —Sept. 27	No	13 Week
05.000	Sept. 6	Sept. 27	Sept. 6 -Oct. 4	No	12 Week
25-30°	Sept. 6	Sept. 27	Sept. 6 -Oct. 11	No	11 Week
	Sept. 6	Sept. 27	Sept. 6 -Oct. 18	No	10 Week

<sup>\*</sup>For No Pinch Method: Plant and Light on Pinch Date

#### VARIETIES IN RESPONSE GROUPS

		15 Week	14 Week	13 Week	12 Week	11 Week	10 Week
	S			Dec. White Smith's White	Chattanooga	Mefo	Ind. White Jean Elizabeth Crystal Queen
WHITE	P	Revelation Snow Tameda Illini Snowbound	Snowcrest Silversmith Snowcap Satellite	Cameo Acclaim Cotillion Carrara Yukon	Monarch	Sculpture Highbrow Paramount Priscilla Belray	Whitetop Illini Igloo Shasta Encore Little America
	S			Chalice Tobin's Yellow Meteore	Golden Pearson Yel. Chai'n'ga Dk. Yel. Chai'n'ga	Yellow Mefo Cream Mefo Harvester	Ind. Yellow Imp. Ind. Yel. Yellow Queen
YELLOW	P	Siren Yuleflame Yellow Snow III. Yel. S'nbound	Yel. Snowcrest Cr. Snowcrest Yel. Snowcap Vibrant	Brandywine Yellow Cameo Cinderella Goldtone Corsair	Goldenrod Highlander Omega Yel. Galaxy	Gold. Chord Forty-Niner Lollipop Pippin Yel. Par'm't	Barcarole Or. Beauregard Yellow Shasta
	S			31.	Oak Leaf		Ind. Bronze Br. Or. Queen
BRONZE & RED	P		Br. Riviera Topaz Christ. Greet'gs Merrymaker Poinsettia	Mah. Viking Holiday Christ. Star Br. Minstrel Dk. Br. Minstrel	Yolanda Galaxy	Shalimar Thelma Festival	Beauregard Rubicon Br. Linda Lou
	S				•	Thanks. Pink	Ind. Pink Orchid Queen Dk. Or. Queen
PINK	P		Riviera Ser. Riviera Rosalind	Debutante Minstrel Lt. Pk. Minstrel	Hasegawa Pink	Brocade Almega	Linda Lou Taffeta

# Glockser To Economy Manual Chrysantheming Manual Commission of the Chrysantheming Manual Commission of the Commission of

### **Chrysanthemum Pot Plant Culture**

Like cut flowers, chrysanthemum pot plants are very profitable the year-around. To flower pot plants the year-around, it is necessary to lay out a plan and follow it to the nth degree. In the following pages, you will find a schedule that has been working successfully for the past several years.

# burning during the hot summer days.

**Temperature** 

Soil

A good, fibrous silt loam directly from the field, to which one-quarter of well-rotted manure or German peat has been added, plus an application of superphosphate will give excellent results. Steam sterilization of the soil is advisable. You can plant immediately after steaming, provided you water heavily after planting the cuttings.

Chrysanthemum pot plants do much better when grown as a 65-degree crop. Lower temperatures will cause an uneven and poor growth. After color shows, finish in a cooler temperature. The pinks and bronzes will be a better color when allowed to develop their color in a bright cool house.

Brown edges on the margins of the leaves during the

summer have been attributed to too much phosphate

and potassium in the soil or in the fertilizer. Some

growers have preferred to go easy on these elements.

and their plants showed very little of the marginal

#### **Watering and Humidity**

After planting, water thoroughly to set the soil around the roots. Repeat this type of watering when the soil gets dry. Organic matter in the soil will facilitate watering and will tend to avoid extreme fluctuations in moisture supply. You can overwater a chrysanthemum as easily as a poinsettia plant. Overwatering will rot the roots, and the tops will take on a very yellow color.

For best results, grow all potted chrysanthemums under glass. Do not shade the glass any more than necessary. Shade on the glass is only there for the convenience of the grower and not for the requirements of the plant. Keep humidity in the house by wetting down benches and walks, and by an occasional syringing over the plants.

#### Shading and Disbudding

Use same procedure as for cut flower crop. Black cloth treatment should continue until the buds are taken. The last pinch is usually made the same day short-day treatment is started. However, if you are troubled with tall potted plants, delay the last pinch 10 to 14 days after starting the shading program. Disbud each shoot to one bud when buds are large enough to handle.

#### Fertilizing

The foliage should retain a bright green luster throughout the life of the plant. The lower leaves should never be allowed to turn a light green due to low fertility. A strong well-grown pot plant is a well-fed plant. Pot plants should be fed more frequently than those grown in a bench, as constant leaching lowers the nutrient level in pots faster than in bench culture.

Liquid fertilizers are very effective. Weekly feedings have produced excellent results. After the cuttings are planted, water the plants in with a weak solution (starter solution) of ammonium sulfate. Feed every week with a half strength ammonium sulfate, 1 ounce to 4 gallons of water. When buds are visable, feed with 15-30-15, 15-15-15, or 20-20-20 at the rate of 1 ounce to 4 gallons of water. Last feeding should be made when the plants are ready to sell. During the winter months do not feed as frequently.



Bonnaffon Deluxe - Singe-Pinch Method



### Chrysanthemum Pot Plant Culture

#### **Planting and Pinching**

Plant the rooted cutting directly in the pot. Do not plant cuttings too deep as in hot weather this will cause Rhizoctonia to develop in the stem. It has been found that the best way to plant the cuttings is around the pot and not the common four with one in the center.

No-Pinch Method. Plant 7 to 9 cuttings in a 6-inch pot and give short-day treatment the same day. It is a very rapid way to grow potted plants the year-around. The blooms will be very large and the stems will be much stronger than when growing pinched plants.

Single-Pinch Method. The most common method of growing potted plants today. It is much faster and produces a very uniform plant with strong stems not too tall. Plant 5 or 6 cuttings in a 6-inch pot. Pinch the plants 5 days after planting and give short-day

treatment the day you pinch.

We suggest that those plants that are planted between September 15 and January 1 be given 12 days of additional light before they are pinched. The reauirements for additional light can be found on page 1. For those plants planted from January 1 to May 1 we suggest that 5 days of additional light be given. The rest of the year the length of day is long enough to produce long day effects. Like all rules there are exceptions and for these exceptions study the yeararound pot plant schedule.

Two-Pinch Method. Probably the most common several years ago, but still very good results can be obtained from this method. Plant 3 or 4 cuttings in a 6-inch pot. Pinch the plants the first time 14 days after planting and wait 21 days and pinch the second time. Long-day treatment should be maintained either naturally or through the use of additional light during this period. Short-day treatment should start at the time

of the second pinch.

Modified Two-Pinch Method. We recommend this cultural method for those varieties that normally grow too tall, such as Queen's Lace, Indianapolis varieties, Copperhead, etc. Grow the plants similar to the "Single-Pinch Method" and start the short-day treatment. After the plant has been given the short-day treatment - 21 or 28 days depending on the time of year, pinch the second time. This second pinching will not delay the flowering very much more than one week but will keep the plant much shorter than if not given

this second pinch.

If plants flower too tall, you had better delay your last pinch by 10 to 14 days. In some localities pot plants will grow taller than in others. Sometimes too much shade on the glass will cause the plants to stretch. Yet there are many varieties that grow too tall when given the short-day treatment the day of the last pinch. If this is true, start short-day treatment and give the final pinch 10 to 14 days after short-day treatment was started. Royal Bronze, Indianapolis varieties, Queen's Lace, Yellow Lace and Little America are often grown too tall, so delay pinching.

#### Garden Mum Pot Plants for Mother's Day

Garden mum plants in full bloom make ideal potted plants for Mother's Day. This should be a valuable addition to the list of spring pot plants. For best results, 5 cuttings should be planted in a 6-inch pot or 2 cuttings in a 4-inch pot. After these pot plants are through flowering, they should be cut back to within 3 inches of the soil level and planted into the garden. These same plants will bloom again in the fall. There is a long list of varieties to choose from, and to facilitate selection, we are offering a 500 cutting collection suitable for this culture. This collection contains the better varieties which have been tried and proven.

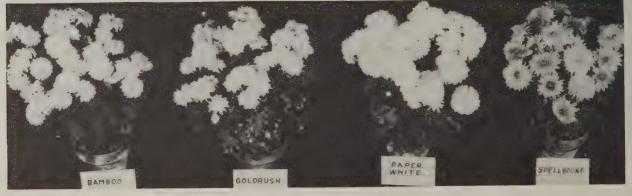
#### SINGLE-PINCH METHOD

- 1. Plant 5 rooted cuttings from lighted stock, March 3 in a 6-inch pot.
- 2. Pinch plants March 8. 3. Grow in 65-degree house.
- 4. Apply black cloth April 12, if necessary.

#### TWO-PINCH METHOD

- 1. Plant 5 rooted cuttings from lighted stock, February 3, and pinch same day.

  2. Apply 4 hours of additional light each night
- from February 3 to March 8.
  3. Pinch second time March 8, give short-day treatment April 12, if necessary.
- 4: Grow in 65-degree house.



# Gloeckner To EEFF Manual Standard

### Year-Around Pot Plant Schedule

	Pla		ONE			-	771		101		
Varieties	5 cuttin	ngs in	Lig	hting	Period	ı		Pinc	h	Shade	Flower
Blazing Gold	Oct.	27	Oct.	27 -	Nov.	8		Nov.	8	no	
Queen's Lace Yellow Lace		20	Oct.	20	- Oct.	25		Oct. Nov.		no	
ndianapolis White Dk. Indianapolis Yel. ndianapolis Pink	Oct.	20	Oct.	20	- Oct.	25		Oct.	25	no	JANUARY 3, 1955
Wilson's White ittle America lueen of Pinks		13	Oct.	13	- Oct.	25		Oct.	25	no	
Bonnaffon Deluxe	Oct.	6	Oct.	6	- Oct.	18		Oct.	18	no	
Blazing Gold	Nov.	3	Nov.	3 -	Nov.	15		Nov.	15	no	
lueen's Lace Yellow Lace	Oct.	27	Oct.	27 -	Nov.	1		Nov. Nov.	1 29	no	
ndianapolis White Dk. Indianapolis Yel. Indianapolis Pink		27	Oct.	27 -	Nov.	1		Nov.	1	no	JANUARY 10, 1955
Wilson's White ittle America lueen of Pinks	Oct.	20	Oct.	20 -	Nov.	1		Nov.	1	no	
Bonnaffon Deluxe	Oct.	13	Oct.	13	- Oct.	25		Oct.	25	no	
Blazing Gold	Nov.	10	Nov.	10	- Nov.	22		Nov.	22	no	
Queen's Lace Yellow Lace		3	Nov.	3	- Nov.	8		Nov. Dec.	8	no	
ndianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Nov.	3	Nov.	3	- Nov.	8		Nov.	8	no	JANUARY 17, 1955
Wilson's White Little America Queen of Pinks		27	Oct.	27 -	- Nov.	8		Nov.	8	no	
Bonnaffon Deluxe	Oct.	20	Oct.	20 -	Nov.	1		Nov.	1	no	
Blazing Gold	Nov.	17	Nov.	17	- Nov.	29		Nov.	29	no	Estation Committees
Queen's Lace Yellow Lace		10	Nov.	10	- Nov.	15		Nov. Dec.		no	
Indianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Nov.	10	Nov.	10	- Nov.	15		Nov.	15	no	JANUARY 24, 1955
Wilson's White	Nov.	3	Nov.	3 -	Nov.	15		Nov.	15	no	
Queen of Pinks											

# Year-Around Pot Plant Schedule ONE-PINCH METHOD

			ONE-PINCH	MEIIIOD		
Varieties	Plan 5 cutting 6" po	s in	Lighting Period	Pinch	Shade	Flower
Blazing Gold	Nov.	24	Nov. 24 - Dec. 6	Dec. 6	no	
Queen's Lace Yellow Lace		17	Nov. 17 - Nov. 22	1st Nov. 22 2nd Dec. 20	no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	Nov.	17	Nov. 17 - Nov. 22	Nov. 22	no	JANUARY 31, 195
Wilson's White Little America Queen of Pinks	Nov.	10	Nov. 10 - Nov. 22	Nov. 22	no	
Bonnaffon Deluxe	Nov.	3	Nov. 3 - Nov. 15	Nov. 15	no	
Blazing Gold	Dec.	1	Dec. 1 - Dec. 13	Dec. 13	no	
Queen's Lace Yellow Lace		24	Nov. 24 - Nov. 29	1st Nov. 29 2nd Dec. 27	no	
Indianapolis White. Dk. Indianapolis Yel Indianapolis Pink	Nov.	24	Nov. 24 - Nov. 29	Nov. 29	no	FEBRUARY 7, 1955
Wilson's White Little America Queen of Pinks	Nov.	17	Nov. 17 - Nov. 29	Nov. 29	no	
Bonnaffon Deluxe	Nov.	10	Nov. 10 - Nov. 22	Nov. 22	no	
Blazing Gold	Dec.	8	Dec. 8 - Dec. 20	Dec. 20	no	
Queen's LaceYellow Lace		1	Dec. 1 - Dec. 6	1st Dec. 6 2nd Jan. 3	no	
Indianapolis White Dk. Indianapolis Ye Indianapolis Pink	Dec.	1	Dec. 1 - Dec. 6	Dec. 6	no	FEBRUARY 14, 1955
Wilson's White Little America Queen of Pinks	Nov.	24	Nov. 24 - Dec. 6	Dec. 6	no	
Bonnaffon Deluxe	Nov.	17	Nov. 17 - Nov. 29	Nov. 29	no	
Blazing Gold	. Dec.	15	Dec. 15 <sup>1</sup> - Dec. 27	Dec. 27	no	
Queen's LaceYellow Lace		8	Dec. 8,- Dec. 13	1st Dec. 13 2nd Jan. 10	no	
Indianapolis White. Dk. Indianapolis Ye Indianapolis Pink	Dec.	8	Dec. 8 - Dec. 13	Dec. 13	no	FEBRUARY 21, 19
Wilson's White Little America Queen of Pinks	Dec.	1	Dec. 1 - Dec. 13	Dec. 13	no	
Bonnaffon Deluxe			Nov. 24 - Dec. 6			

# Glockner To Stanthemin Manual

## Year-Around Pot Plant Schedule

			ONE-PINCH	WEIHOD		
Varieties	Plar 5 cutting 6" p	gs in	Lighting Period	Pinch	Shade	Flower
Blazing Gold	Dec.	22	Dec. 22 - Jan. 3	Jan. 3	no	
Queen's Lace Yellow Lace		15	Dec. 15 - Dec. 20	1st Dec. 20 2nd Jan. 17	no	•
Indianapolis White. Dk. Indianapolis Ye Indianapolis Pink	Dec.	15	Dec. 15 - Dec. 20	Dec. 20	no	FEBRUARY 28, 1955
Wilson's White Little America Queen of Pinks	Dec.	8	Dec. 8 - Dec. 20	Dec. 20	no	
Bonnaffon Deluxe	Dec.	1	Dec. 1 - Dec. 13	Dec. 13	no	
Blazing Gold	Dec.	29	Dec. 29 - Jan. 10	Jan. 10	no	
Queen's Lace Yellow Lace		22	None	1st Dec. 27 2nd Jan. 24	no	
Indianapolis White. Dk. Indianapolis Yel Indianapolis Pink	Dec.	22	Dec. 22 - Dec. 27	Dec. 27	no	MARCH 7, 1955
Wilson's White Little America Queen of Pinks	Dec.	15	Dec. 15 - Dec. 27	Dec. 27	по	
Bonnaffon Deluxe	Dec.	8	Dec. 8 - Dec. 20	Dec. 20	no	
Blazing Gold	Jan.	12	Jan. 12 - Jan. 17	Jan. 17	no	
Queen's Lace Yellow Lace		29	None	1st Jan. 3 2nd Jan. 31	no	
Indianapolis White. Dk. Indianapolis Ye Indianapolis Pink	Dec.	29	None	Jan. 3	no	MARCH 14, 1955
Wilson's White Little America Queen of Pinks	Dec.	29	Dec. 29 - Jan. 3	Jan. 3	no	
Bonnaffon Deluxe	Dec.	22	Dec. 22 - Dec. 27	Jan. 27	no	
Blazing Gold	Jan.	19	Jan. 19 - Jan. 24	Jan. 24	no	
Queen's Lace Yellow Lace		5	None	1st Jan. 5 2nd Jan. 31	no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	Jan.	5	None	Jan. 10	no	MARCH 21, 1955
Wilson's White Little America	Jan.	5	Jan. 5-Jan. 10	Jan. 10	no	
Queen of Pinks						

# Year-Around Pot Plant Schedule

Varieties	Plai 5 cuttin 6" p	gs in	Lig	hting Period	I	Pin	ch	Shade	Flower
Blazing Gold			Jan.	27 - Feb.	1	Feb.	1	Mar. 22	
Queen's Lace	Jan.	13	None			1st Jan. 2nd Feb.	13	no	
ndianapolis White Dk. Indianapolis Yel. Indianapolis Pink		13	None			Jan.	18	no	MARCH 29, 1954
Wilson's White Little America Queen of Pinks		13	Jan.	13 - Jan.	18	Jan.	18	no	
Bonnaffon Deluxe	Jan.	6	Jan.	6 - Jan.	11	Jan.	11	no	
Blazing Gold	Feb.	3	Feb.	3 - Feb.	8	Feb.	8	no	
Granite State	Jan.	27	Jan.	27 - Feb.	1	Feb.	1	no	
Queen's Lace Yellow Lace		20	None			1st Jan. 2nd Feb.		no	
Indianapolis White. Dk. Indianapolis Yel Indianapolis Pink	Jan.	20	None			Jan.	25	no	APRIL 5, 1954
Wilson's White Queen of Pinks Portrait		20	Jan.	20 - Jan.	25	Jan.	25	no	
Bonnaffon Deluxe	Jan.	13	Jan.	13 - Jan.	18	Jan.	18	no	
Blazing Gold	Feb.	10	Feb.	10 - Feb.	15	Feb.	15	no	
Granite State	Feb.	3	Feb.	3 - Feb.	8	Feb.	8	no	
Queen's Lace Yellow Lace		27	None	•		1st Jan. 2nd Feb.		no	
Indianapolis White. Dk. Indianapolis Yel Indianapolis Pink	· Jan.	27	None			Feb.	. 1	no	APRIL 12, 1954
Wilson's White Queen of Pinks Portrait		27	Jan.	27 - Feb.	. 1	Feb.	1	no	
Bonnaffon Deluxe	. Jan.	20	Jan.	20 - Jan.	25	· Jan.	25	no	
Blazing Gold	· Feb.	. 17	Feb.	17℃ Feb.	. 22	Feb.	22	no	
Granite State	. Feb.	. 10	Feb.	10 - Feb.	. 15	Feb	. 15	no	
Queen's LaceYellow Lace		. 3	None	•		1st Feb. 2nd Mar		no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	• Feb	. 3	None	9		Feb	. 8	Mar. 22	APRIL 19, 1954
Wilson's White Queen of Pinks Portrait	. Feb	. 3	Feb.	3 - Feb.	. 8	Feb	. 22	Mar. 22	
Bonnaffon Deluxe			· Jar			Feb		Mar. 15	

# Gloeckner Chrysanthemum Manual

# Year-Around Pot Plant Schedule ONE-PINCH METHOD

	ON	E-PINCH	MEIHOL	,	
Varieties	Plant 5 cuttings in 6" pot	Lighting Period	Pinch	Shade	Flower
Blazing Gold	Feb. 24	Feb. 24 - Mar. 1	Mar. 1	no	
Granite State	Feb. 17	Feb. 17 - Feb. 22	Feb. 22	Mar. 29	
Queen's LaceYellow Lace		None	1st Feb. 10 2nd Mar. 8	Mar. 29	
Indianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Feb. 10	None	Feb. 15	Mar. 22	APRIL 26, 1954
Wilson's White Queen of Pinks Portrait	Feb. 10	Feb. 10 - Feb. 15	Feb. 15	Mar. 22	
Bonnaffon Deluxe	Feb. 3	Feb. 3 - Feb. 8	Feb. 8	Mar. 15	
Blazing Gold	Mar. 3	Mar. 3 - Mar. 8	Mar. 8	Apr. 5	
Granite State	Feb. 24	Feb. 24 - Mar. 1	Mar. 1	Mar. 29	
Queen's LaceYellow Lace		None	1st Feb. 17 2nd Mar. 15	Mar. 29	
Indianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Feb. 17	None	Feb. 22	Mar. 22	MAY 3, 1954
Wilson's White Queen of Pinks Portrait	Feb. 17	Feb. 17 - Feb. 22	Feb. 22	Mar. 22	
Bonnaffon Deluxe	Feb. 10	Feb. 10 - Feb. 15	Feb. 15	Mar. 15	
Blazing Gold	Mar. 10	None	Mar. 15	Apr. 5	
Granite State	Mar. 3	None	Mar. 8	Mar. 29	
Queen's LaceYellow Lace		None	1st Feb. 24 2nd Mar. 22	Mar. 29	
Indianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Feb. 24	None	Mar. 1	Mar. 22	MAY 10, 1954
Wilson's White Queen of Pinks Portrait	Feb. 24	Feb. 24 - Mar. 1	Mar. 1	Mar. 22	
Bonnaffon Deluxe	Feb. 17	Feb. 17 - Feb. 22	Feb. 22	Mar. 15	
Blazing Gold	Mar. 17	None	Mar. 22	Apr. 5	
Granite State	Mar. 10	None	Mar. 15	Mar. 29	
Queen's LaceYellow Lace	Mar. 3	None	1st Mar. 3 2nd Mar. 29	Mar. 29	
Indianapolis White Dk. Indianapolis Yel. Indianapolis Pink	Mar. 3	None	Mar. 8	Mar. 22	MAY 17, 1954
Wilson's White Queen of Pinks Portrait	Mar. 3	Mar. 3 - Mar. 8	Mar. 8	Mar. 22	
	Feb. 24	Feb. 24 - Mar. 1	Mar. 1	Mar. 15	

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## Year-Around Pot Plant Schedule

	Varieties	Plant 5 cuttings i 6" pot	in Pinc	h Sho	ade	Flower
Blazing	Gold	Mar. 24	4 Mar.	29 Apr.	5	
Granite	State	Mar. 17	7 Mar.	22 Mar.	. 29	
Queen's Yellow	LaceLace	Mar. 1	0 1st Mar. 2nd Apr.		. 29	
)k. Indi	polis White anapolis Yellow polis Pink	Mar. 1	0 Mar.	15 Mar	. 22	MAY 24, 1954
lueen o	White f Pinks	Mar. 1	0 Mar.	15 Mar	. 22	
Bonnaff	on Deluxe	Mar.	3 Mar.	8 Mar	. 15	
Blazing	Gold	Mar. 3	Apr.	5 Apr	. 5	
Granite	State	Mar. 2	4 Mar.	29 Mar	. 29	
	LaceLace		7 1st Mar. 2nd Apr.		. 29	MAY 31, 1954
Dk. Indi Indiana Wilson's Queen o	polis White	Mar. 1	7 Mar.	. 22 Mar	. 22	
Bonnaff	on Deluxe	Mar. 1	0 Mar.	. 15 Mar	. 15	
Blazing	Gold	Apr.	7 Apr.	12 Apr	. 12	
Granite Wilson's	State	Mar. 3	Apr.	5 Apr	. 5	
Portrait		Mar. 2	4 Mar	. 29 Mai	. 29	JUNE 7, 1954
Queen's Yellow	LaceLace	Mar. 2	1st Mar. 2nd Apr.		. 24	
Bonnaff	on Deluxe	Mar. 1	7 to Mar.	. 22 Mai	. 22	
Blazing	Gold	Apr. 1	4 Apr.	. 19 Apr	. 19	
Granite Wilson's	State White	Apr.	7 Apr.	. 12 Apr	. 12	
Portrait		Mar. 3	Apr.	5 Apr	. 5	JUNE 14, 1954
	LaceLace		1 Ist Mar. 2nd Apr.		. 31	
	on Deluxe			. 29 Mai		

# Year-Around Pot Plant Schedule ONE-PINCH METHOD

	Varieties	Plant 5 cuttings in 6" pot	Pinc	h	Shade	Flower
Blazing	Gold	Apr. 21	Apr.	26	Apr. 26	
ranite Vilson's	StateWhite	Apr. 14	Apr.	19	Apr. 19	
ortrait.	•••••	Apr. 7	Apr.	12	Apr. 12	JUNE 21, 1954
lueen's 'ellow I	Laceace	Apr. 7	1st Apr. 2nd May	7 3	Apr. 7	
Sonnaffe	on Deluxe	Mar. 31	Apr.	5	Apr. 5	
lazing	Gold	Apr. 28	Мау	3	May 3	
iranite Vilson's	StateWhite	Apr. 21	Apr.	26	Apr. 26	
ortrait.	••••••	Apr. 14	Apr.	19	Apr. 19	JUNE 28, 1954
lueen's 'ellow I	Laceace	Apr. 14	1st Apr. 2nd May		Apr. 14	
Sonnaffo	on Deluxe	- Apr. 7	Apr.	12	Apr. 12	
lazing	Gold	May 5	Мау	10	May 10	
iranite Vilson's	StateWhite	- Apr. 28	Мау	3	May 3	
ortrait.		Apr. 21	Apr.	26	Apr. 26	JULY 5, 1954
ueen's 'ellow I	Laceace	Apr. 21	1st Apr. 2nd May		Apr. 21	
onnaffo	n Deluxe	Apr. 14	Apr.	19	Apr. 19	
lazing	Gold	May 12	Мау	17	May 17	
iranite Vilson's	State	·· May 5	May	10	May 10	JULY 12, 1954
ortrait.		Apr. 28	May	3	May 3	
onnaffo	on Deluxe	Apr. 21	Apr.	26	Apr. 26	
lazing	Gold	May 19	May	24	May 24	
iranite Vilson's	StateWhite	May 12	May	17	May 17	JULY 19, 1954
ortrait.		May 5	May	10	May 10	
onnaff	on Deluxe	Apr. 28	Мау	3	May 3	
lazing	Gold	May 26	May	31	May 31	
iranite Vilson's	StateWhite	May 19	May	24	May 24	JULY 26, 1954
Portrait.		May 12	Мау	17	May 17	3021 201 1701
onnaffo	on Deluxe	May 5	May	10	May 10	

## Year-Around Pot Plant Schedule

Varieties	Plant 5 cuttings in 6" pot	Pinch	Shade	Flower
Blazing Gold	June 2	June 7	June 7	
Granite State Wilson's White	May 26	May 31	May 31	AUGUST 2, 1954
Portrait	May 19	May 24	May 24	
Bonnaffon Deluxe	May 12	May 17	May 17	_
Blazing Gold	June 9	June 14	June 14	
Granite State Wilson's White	June 2	June 7	June 7	AUGUST 9, 1954
Portrait	May 26	May 31	May 31	
Bonnaffon Deluxe	May 19	May 24	May 24	
Blazing Gold	June 16	June 21	June 21	
Granite State Wilson's White	June 9	June 14	June 14	AUGUST 16, 195
Portrait	June 2	June 7	June 7	
Bonnaffon Deluxe	May 26	May 31	May 31	
Christina Blazing Gold	June 23	June 28	June 28	
Granite State Wilson's White	June 16	June 21	June 21	AUGUST 23, 195
Portrait	June 9	June 14	June 14	
Bonnaffon Deluxe	June 2	June 7	June 7	
ChristinaBlazing Gold	June 30	July 5	July 5	
Granite State Wilson's White	June 23	June 28	June 28	AUGUST 30, 19
Portrait	June 16	June 21	June 21	
Bonnaffon Deluxe	June 9	June 14	June 14	
ChristinaBlazing Gold	July 7	July 12	July 12	•
Granite State Wilson's White Royal Bronze	June 30	July 5	July 5	SEPTEMBER 6, 195
Gypsy Red King Cadel Cover Girl Dueen of Pinks Portrait	June 23	June 28	June `28	
Carole Bonnaffon Deluxe	June 16	June 21	June 21	

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## Year-Around Pot Plant Schedule

Varieties	Plant 5 cuttings in 6" pot	Pinch	Shade	Flower
Christina Blazing Gold	July 14	July 19	July 19	
Granite State Wilson's White Royal Bronze	July 7	July 12	July 12	SEPTEMBER 13, 195
Gypsy	June 30	July 5	July 5	
Carole Bonnaffon Deluxe	June 23	June 28	June 28	
Christina Blazing Gold	July 21	July 26	July 26	
Granite State Wilson's White Royal Bronze	July 14	July 19	July 19	SEPTEMBER 20, 195
Gypsy	July 7	July 12	July 12	
Carole Bonnaffon Deluxe	June 30	July 5	July 5	
Christina Blazing Gold	July 28	Aug. 2	Aug. 2	SEPTEMBER 27, 19
Granite State Wilson's White Royal Bronze	July 21	July 26	July 26	
Gypsy		July 19	July 19	
Carole Bonnaffon Deluxe	July 7	July 12	July 12	
Christina Blazing Gold		Aug. 9	Aug. 9	
Granife State Wilson's White *Royal Bronze	July 28	Aug. 2	Aug. 2	OCTOBER 4, 1954
Gypsy	July 21	July 26	July 26	
Carole Bonnaffon Deluxe	July 14	July 19	July 19	

## Year-Around Pot Plant Schedule

Varieties	Plant 5 cuttings in 6" pot	Pinch	Shade	Flower
Christina	Aug. 11	Aug. 16	Aug. 16	
Granite State	Aug. 4	Aug. 9	Aug. 9	
Gypsy	July 28	Aug. 2	Aug. 2	OCTOBER 11, 1954
Carole Bonnaffon Deluxe	July 21	July 26	July 26	
Christina Blazing Gold	Aug. 18	Aug. 23	Aug. 23	
Granife State	Aug. 11	Aug. 16	Aug. 16	OCTOBER 18, 1954
Gypsy	Aug. 4	Aug. 9	Aug. 9	
CaroleBonnaffon Deluxe	July 28	Aug. 2	Aug. 2	
Christina Blazing Gold	Aug. 25	Aug. 30	Aug. 30	
Granite State	Aug. 18	Aug. 23	Aug. 23	OCTOBER 25, 1954
Gypsy Red King Cadet Cover Girl Queen of Pinks Portrait	Aug. 11	Aug. 16	Aug. 16	
Carole Bonnaffon Deluxe	Aug. 4	Aug. 9	Aug. 9	
Christina Blazing Gold	···· Sept. 1	Sept. 6	no	
Granite State	Aug 25	, Aug. 30	Aug. 30	
lypsy Red King Ladet Lover Girl Lueen of Pinks Portrait	 Aug. 18	Aug. 23	Aug. 23	NOVEMBER 1, 1954
Carole	Aug. 11	Aug. 16	Aug. 16	

# Year-Around Pot Plant Schedule

Varieties	Plant 5 cuttings in 6" pot	Pinch	Shade	Flower
Christina Blazing Gold	Sont R	Sept. 13	no	<del></del>
Granite State	Sept. 1	Sept. 6	Sept. 6	
Gypsy Red King Cadet Cover Girl Queen of Pinks Portrait	Aug. 25	Aug. 30	Aug. 30	NOVEMBER 8, 1954
Carole Bonnaffon Deluxe Illini Formal	· Aug. 18	Aug. 23	Aug. 23	
Christina Blazing Gold	Sept. 15	Sept. 20	no	
Granite State	Sept. 8	Sept. 13	Sept. 13	
Gypsy. Red King	Sept. 1	Sept. 6	Sept. 6	NOVEMBER 15, 1954
CaroleBonnaffon DeluxeIllini Formal	. Aug. 25	Aug. 30	Aug. 30	
ChristinaBlazing Gold	Sept. 22	Sept. 27	no	
Granite State	Sept. 15	Sept. 20	no	
Gypsy	Sept. 8	Sept. 13	Sept. 13	NOVEMBER 22, 195
Carole	·· Sept. 1	Sept. 6	Sept. 6	
White Lady Beautiful Lady	Aug. 25	Aug. 30	Aug. 30	
ChristinaBlazing Gold	: Sept. 29	Oct. 4	no	
Granite State Wilson's White* Royal Bronze	Sept. 22	Sept. 27	no	
Gypsy Red King Cadef Cover Girl Queen of Pinks Portrait	 Sept. 15 	Sept. 20	no	NOVEMBER 29, 195
Carole Bonnaffon Deluxe Illini Formal	Sept 8	Sept. 13	Sept. 13	
White Lady Beautiful Lady	" Sent. 1	Sept. 6	Sept. 6	

# Year-Around Pot Plant Schedule ONE-PINCH METHOD

Varieties	Pla 5 cuttin	gs in	Lig	hting Period	d	Pic	nch	Shade	Flower
Christina	6″ 1		0.1	1 0 1					
Blazing Gold		- 6	Oct,	6 - Oct.		Oct.	. 11	no	
Granite State	: Sept	. 29	Sept.	29 - Oct.	4	Oct	. 4	no	
Queen's LaceYellow Lace	. Sept	. 22	None			1st Sept 2nd Oct.		по	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	. Sept.	22	None			Sept	. 27	no	DECEMBER 6, 1954
Red KingLittle AmericaQueen of PinksPortrait	Sept.	22	Sept.	22 - Sept.	27	Sept	. 27	no	
Bonnaffon Deluxe	Sept.	15	Sept.	15 - Sept.	20	Sept	. 20	no	
Christina	Oct.	13	Oct.	13 - Oct.	18	Oct.	18	no	
Granite StateWilson's White	Oct.	6	Oct.	6 - Oct.	11	Oct.	11	no	
Queen's LaceYellow Lace	Sept.	29	None			1st Sept 2nd Oct.		no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	Sept.	29	None			Oct.	4	no	DECEMBER 13, 1954
Red King Little America Queen of Pinks Portrait	Sept.	29	Sept.	29 - Oct.	4	Oct.	4	no	
Bonnaffon Deluxe	Sept.	22	Sept.	22 - Sept.	27	Sept.	. 27	no	
ChristinaBlazing Gold	Oct.	13	Oct.	13 - Oct.	25	Oct	25	no	
Granite State	Oct.	6	Oct.	6 - Oct.	18	Oct.	18	no	
Queen's Lace Yellow Lace	Sept.	29	None	mark at here hay jone as		1st Sept. 2nd Oct.		no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	Oct.	6	Oct.	6 - Oct.	11	Oct.	11	no	DECEMBER 20, 1954
Red King Little America Queen of Pinks Portrait		29	Sept.	29 - Oct.	11	Oct.	11	no	
Bonnaffon Deluxe	Sept.	22	Sept.	22 - Oct.	4	Oct.	4	no	
ChristinaBlazing Gold			Oct.	20 - Nov.	1	Nov.	1	по	7
Granite StateWilson's White	Oct.	13	Oct.	13 - Oct.	25	Oct.	25	no	
Queen's LaceYellow Lace	Oct.	6	None	•		1st Oct. 2nd Nov.	6	no	
Indianapolis White Dk. Indianapolis Yel Indianapolis Pink	Oct.	13	Oct.	13 - Oct.	18	Oct.	18	no	DECEMBER 27, 1954
Red King Little America Queen of Pinks Portrait	Oct.	6	Oct.	6 - Oct.	18	Oct.	18	no	
Bonnaffon Deluxe	Sept.	29	Sept. 2	29 - Oct. 1	11	Oct.	11	no	

# Gloeckner The Constitution Manual Thanual

### Pot Plant Schedule

### TWO-PINCH METHOD

Varieties Plant	First Pinch	Shade and Last Pinch	Flower
ChristinaJune 9	June 21	July 12	
Granite State	June 14	July 5	
Gypsy	June 7	June 28	SEPTEMBER 6
Carole May 19	May 31	June 21	
ChristinaJune 16	June 28	July 19	
Granite State	June 21	July 12	SEPTEMBER 13
Gypsy	June 14	July 5	
Carole May 26	June 7	June 28	
Christina	July 5	July 26	
Granite State	June 28	July 19	
Gypsy	June 21	July 12	SEPTEMBER 20
CaroleJune 2	June 14	July 5	
Christina	July 12	Aug. 2	
Granite State	July 5	July 26	SEPTEMBER 27
Gypsy	June 28	July 19	
CaroleJune 9	June 21	July 12	

Gloeckner To Engsantheming Manual

## Pot Plant Schedule

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Varieties	Plant	First Pinch	Shade and Last Pinch	Flower
Christina	July 7	July 19	Aug. 9	
Granite State	June 30	July 12	Aug. 2	
Gypsy	June 23	July 5	July 26	OCTOBER 4
CaroleBonnaffon Deluxe	June 16	June 28	July 19	
Christina Blazing Gold	July 14	July 26	Aug. 16	
Granite State		July 19	Aug. 9	OCTOBER 11
Gypsy	June 30	July 12	Aug. 2	
Carole Bonnaffon Deluxe	June 23	July 5	July 26	
Christina Blazing Gold	July 21	Aug. 2	Aug. 23	
Granite State	10hr 14	July 26	Aug. 16	
Gypsy	July 7	July 19	Aug. 9	OCTOBER 18
Carole Bonnaffon Deluxe	June 30	July 12	Aug. 2	
Christina Blazing Gold	July 28 ;	Aug. 9	Aug. 30	
Granite State Wilson's White Royal Bronze	luk 21 .	Aug. 2	Aug. 23	
Gypsy Red King Cadet Cover Girl Queen of Pinks Portrait	July 14	July 26	Aug. 16	OCTOBER 25
Carole Bonnaffon Deluxe	July 7	July 19	Aug. 9	

# Gloeckner To Stanthemin Manual

# Pot Plant Schedule

		WO-F	PINCH MET	HOD		
Varieties	Plant	First Pinch	Lighting Period	Last Pinch	Shade	Flower
Wilson's White Granite State Golden Glory Royal Bronze	July 28	Aug. 9	Aug. 2 - Aug. 29	Aug. 29	no	
Little America	July 21	Aug. 2	no	Aug. 23	Aug. 23	NOVEMBER 1
Bonnaffon Deluxe	July 14	July 26	no	Aúg. 16	Aug. 16	
Wilson's White Granite State Royal Bronze	Aug. 4	Aug. 16	Aug. 4 - Sept. 6	Sept. 6	no	
Little America	July 28	Aug. 9	no	Aug. 30	no	NOVEMBER 8
Bonnaffon Deluxe	July 21	Aug. 2	no	Aug. 23	Aug. 23	
Wilson's WhiteRoyal Bronze	Aug. 11	Aug. 23	Aug. 11 - Sept. 13	Sept. 13	no	
Little America	Aug. 4	Aug. 16	Aug. 10 - Sept. 6	Sept. 6	no	NOVEMBER 15
Bonnaffon Deluxe	July 28	Aug. 9	no	Sept. 4	no	
Wilson's WhiteRoyal Bronze	Aug. 18	Aug. 30	Aug. 18 - Sept. 20	Sept. 20	no	
Little America	Aug. 11	Aug. 23	Aug. 11 - Sept. 13	Sept. 13	no	NOVEMBER 22
Bonnaffon Deluxe	Aug. 4	Aug. 16	Aug. 16 - Sept. 6	Sept. 6	no	
Wilson's White Royal Bronze	Aug. 25	Sept. 6	Aug. 25 - Sept. 27	Sept. 27	no	
Little America	. Aug. 19	Aug. 30	Aug. 18 - Sept. 20	Sept. 20	no	NOVEMBER 29
Bonnaffon Deluxe	- Aug. 11	Aug. 23	Aug. 11 - Sept. 13	Sept. 13	no	
Wilson's White Royal Bronze	Sept. 1	Sept. 13	Sept. 1 - Oct. 4	Oct. 4	no	
Little America	Aug. 25	Sept. 6	Aug. 25 - Sept. 27	Sept. 27	no	DECEMBER 6
Bonnaffon Deluxe	. Aug. 18	Aug. 30	Aug. 18 - Sept. 20	Sept. 20	no	-

# 3355 Chrysanthemin Manual

### Better Chrysanthemums

CUTTINGS

To grow good chrysanthemums, the first requisite is to start with Verticillium wilt and stunt-free cuttings. Wilt-free cuttings are easily secured. Now with the extreme care in selecting stunt-free stock and with careful handling, we are very optimistic in stating that stunt should be practically nil in the stock for the coming season.

#### **Handling Cuttings**

The cuttings you receive have been propagated in a material containing some organic matter which naturally has some plant food. Consequently these cuttings can be planted directly into the final location. Ordinarily they will not require shading, but if they have been several days in transit and have softened up some, or if they are planted during warm, bright weather, shading with aster cloth or paper is advisable. Under no circumstances leave the covering on the plants during dull weather or at night. It is well to syringe the plants frequently until they stand up and are showing signs of growth. Some evidence shows that watering with a starter solution (weak nutrient solution) within 48 hours after planting will speed up the growth.

#### **Deliveries**

With the advent of the time pinch and the precision method of culture, it is necessary to have your cuttings arrive at a definite date. To insure proper delivery, you must plan your cutting requirements months in advance of the date wanted. We would appreciate it if you could let us know your requirements so that our propagator can plan his growing of stock plants and cuttings even more systematically than he does.

To facilitate deliveries, cuttings will be shipped on Mondays and Tuesdays of each week.

#### Delays

With the reduced delivery schedule of the Railway Express Agency, there may be delays in delivering your shipments. Chrysanthemum cuttings can be injured from cold as well as being too long in transit. If the cuttings are slightly wilted, they should be immersed in water for a short period and then planted. They will

react perfectly to such treatment. If the cuttings have been slightly frozen, placing them in a cool room and thawing them out gradually, or placing them in a pail of cool water to take the frost out will bring them through so that they will do just as well as cuttings that have had nothing happen to them. Of course, if stock is badly frozen, or if long delays have occurred so that the cuttings are heated, yellow or rotted, you should file a claim at once with the express company.

#### Air Freight

We have been very well satisfied with the use of Air Freight to deliver rooted cuttings this past season. Customers who are close to an airport are naturally served better than those who have to have their shipment reconsigned via Railway Express. If you plan to use air freight, you should have your telephone number appear on all shipping labels.

#### **Premature Budding**

But initiation can occur anytime during the spring months, whenever your temperatures in the greenhouses are consistently 60 degrees Fahrenheit or above, and the days are short enough to initiate bud setting. These conditions can occur anytime up until May 1st depending upon the variety and the locality in which they are being grown. Some varieties, such as the garden varieties and early shading varieties, require very little short-day treatment, coupled with high temperatures to initiate buds. This same tendency to set bud readily is what makes these varieties desirable for early shading and garden work. In order to prevent this premature setting of buds, these same varieties should be placed where they can be given additional light during the early spring months. Use 60-watt bulbs spaced 4 feet apart and 24 inches above the plants. Three hours of light during the middle of the dark period will prevent budding completely if the minimum intensity is 8-foot candles. The same treatment on either end of the night might not be effective if you have a particularly cloudy period which gives you extremely short day.



Strong Cuttings Spaced Well in Propagation Medium Will Produce Healthy Well-Rooted Cuttings

### **Cultural Pointers**

#### SOILS

Chrysanthemums will grow in a wide range of soil types, but a fibrous silt-loam is preferred. Blue grass sod, to which rotted manure has been added, plus an application of superphosphate will give excellent results. The reason for the great care in soil preparation is to permit penetration of water and a uniform supply of fertilizer. If water remains on the surface of your soil for more than a few moments after watering, your soil is not of good structure.

#### Acidity

Evidence shows that the soil reaction should be slightly acid, pH 6.5, although in many instances a neutral medium does very well. If your soil tests slightly alkaline, apply one-half to one pound of agricultural sulfur per 100 sq. ft. of area. However, if your soil is acid, apply 3 to 5 pounds of agricultural ground limestone per 100 sq. ft. of area.

#### **Steam Sterilization**

Steam sterilization is the only practical means known to destroy the Verticillium wilt organisms present in many soils. The cuttings you purchase are free from wilt, but if planted in soil that is not steam sterilized, many will contract the trouble.

Old soil, when properly managed, will give results comparable to fresh soil. Add a quarter of the volume of humus in the form of manure or peat moss. Steam sterilize to destroy the Verticillium wilt fungus, as well as improve the structure of the soil. Steam sterilization may be done with the use of 3-inch tile or down spouting with one-eighth inch holes drilled every 6 inches on each side of the pipe. Use 2 lines in a three and onehalf foot bench. Ridge the soil to the center of the bench directly over the lines, covering with a tarpaulin, canvas or Sisalkraft. The Thomas method is very similar,



Supporting Standards with the String Method

with the exception that the pipe is laid on top of the rototilled soil and then covered so as to make it airtight. The Thomas method is not recommended where purlin posts are in the bench.

By introducing the steam in the center of a 100-foot bench and sending the steam in both directions, a more thorough sterilization is accomplished than if the steam were to be forced in at the end of the 100-foot bench. Cover the sides of the benches so that the entire bench and contents are heated to 180 degrees Fahrenheit. Remove the covering one hour after the steam has been cut. This allows the excess moisture to pass from the soil as vapor. We are now recommending that you plant immediately after the soil has cooled. Water in the plants heavily so that you are combining watering and leaching into one operation. Continue to water heavily every time you water.

#### **Chemical Sterilization**

A chemical which has proven its worth is Larvacide. This material must be used when the greenhouses are empty to avoid injury to adjoining crops. This gas is applied in liquid form with a special applicator so that 2 or 3 c.c. are applied at 10-inch centers. The soil should be moist before applying. A good suitable covering should be placed over the treated soil to keep the gas in the soil for at least 48 hours, although a water seal applied 2 to 3 times every 24 hours will suffice. The soil temperature should be at least 60 degrees or higher. When used properly you can expect favorable control of insects, diseases and weed seeds.

Dowfume MC 2 has been tried and found to control nematodes, weed seeds, and some damping-off organisms. Best results are obtained when the soil temperature is above 60 degrees. About the same procedure should be followed in its application as that described for Larvacide.





Thomas Method of Steam Sterilization

# Cultural Pointers SOILS — (Continued)

#### Aeration

Proper drainage and proper aeration of the soil are very vital to good growth. Many times improper drainage of the bench or bed is the reason for a poor crop. No wet spots should ever be present. Soil drainage may be improved by the addition of various materials. Any coarse organic material such as manure, alfalfa hay or clover hay applied at a rate not to exceed one-fourth the volume will separate the soil particles sufficiently to increase pore space.

Adding several bushels of peat per 100 sq. ft. of bench area before planting and worked into the top inch of the soil will help keep the surface open and porous. Heavy applications of sand to a soil have not always proven of value to a chrysanthemum crop. Aeration may also be increased by proper cultivation of the soil.

#### Soil Management

Soils vary a great deal over the country, and yet many good crops of chrysanthemums are grown on all types of soil. Soil itself is not the most important factor, but soil management is of extreme importance. In considering the management of the soil, the following steps are suggested:

- 1. Apply a quarter of the volume of manure or other organic substitute once a year, usually just before steam sterilization. Rototill organic matter into the soil. When growing on ground beds, watch the tilling so that no impervious layer is formed which will later cause poor drainage.
- 2. Steam sterilize the soil to a temperature of 180 degrees Fahrenheit at least once a year. Usually this is done during the summer months.
- 3. Apply 5 pounds of super phosphate per 100 sq. ft. of area once a year.
- 4. After each steam sterilization apply 5 pounds of gypsum (Calcium sulfate) per 100 sq. ft.
- 5. Test soil for acidity and make correction before planting.

- 6. Add several bushels of granular peat per 100 sq. ft. of area before planting and working into the top inch of the soil.
- 7. Plant immediately after the soil cools. Waiting a week or two will increase the soluble salts into a dangerous concentration.
- 8. Water heavily after planting so that you are combining watering and leaching. Continue to water heavily until the plants have become well established.
- 9. Maintain the following nutrient levels:

Nitrate Nitrogen	5-10 p.p.m.
Phosphorus	5-10 p.p.m.
Potassium	20-40 p.p.m.
Calcium	200-250 p.p.m.
Solubridge reading	40 or lower

 Apply a complete fertilizer at time of bud initiation. Heavy watering and frequent light fertilizing will make chrysanthemums grow.



Terminal Spray Formation Resulting from Time Pinching Showing Cornell Weight Grades

### **Cultural Pointers**

#### FERTILIZERS

Soil structure is the key to soil fertility. The response of chrysanthemums to fertilization depends upon a favorable soil structure. It is known that plants require nutrients, water and air for growth. Good soil structure will provide proper air and water relationships. Therefore, it behooves us to give proper attention to the soil before starting the crop. Good open soil is a necessity.

#### Feeding

Chrysanthemums do much better right from the start if the soil is not too rich. Very often this crop will start off faster in new soil as compared to old soil that has been sterilized just because of the lower nutrient level in new soil. When using new soil, apply 5 pounds of superphosphate per 100 sq. ft. of area, plus a liberal application of manure before planting. Phosphorus moves slowly within the soil mixture. It should always be added before the crop is benched so that it may be mixed thoroughly into the soil. One to two applications of a complete fertilizer, such as Electra, made after the plants become established and until color shows will be adequate. Electra applied at the rate of 2 pounds per 100 sq. ft. of bed is sufficient. Never apply fertilizers to a dry soil. Water lightly first, then apply the proper quantity of fertilizer, and then water heavily. Liquid feeding with water-soluble fertilizers is fast becoming the popular method of applying fertilizer. Remember that the plant is the best guide to fertilizer requirements and that more mums are ruined by overfeeding than by nutrient deficiencies.

#### Levels of Nutrition

When using sterilized soil, the best recommendations to follow would be to analyze your soil from time to time. We have found that when the following nutrient levels are kept, good crops are the result. Nitrate nitrogen should be 5-10 p.p.m.; phosphorus 5-10 p.p.m.; potassium 20-40 p.p.m. and calcium near 200 p.p.m. To increase the nitrate level, feed one pound of ammonium sulfate per 100 sq. ft. of area, and to bring up the potassium, apply muriate of potash not to exceed 1 pound per 100 sq. ft. If phosphorus is needed, apply mono-calium phosphate at the rate of 1 pound per 100 sq. ft.

A liberal application of calcium sulfate (gypsum), 5 pounds per 100 sq. ft., after steam sterilization will prevent injury to young roots. High phosphorus also

reduces toxicity after sterilization.

In the cooler weather and shorter days of September, omit the nitrogen if the plants are growing freely. The mum assimilates more phosphorus and potassium during the time of bud initiation. Therefore, it is desirable to apply a complete fertilizer shortly after the buds are visible.

#### Soluble Salts

Soluble salts are chemical compounds consisting of an acid part (ion) and a basic part (ion). For example, common table salt, sodium chloride, consists of one ion of chloride and one of sodium. Chloride is an acidforming ion, and sodium a basic or alkali-forming ion, The two combine in chemically equivalent quantities to form a neutral salt. Other common acidic ions are sulfate, nitrate, bicarbonate and phosphate. Other common basic ions are calcium, magnesium, potassium and ammonium. Any basic ion may combine with any acidic ion giving rise to a great variety of salts.

All plant nutrients which are absorbed by plants from the soil or from culture solutions are obsorbed in the form of salts or their constituent ions. All arganic materials become "mineralized" through decay processes, and the nutrients in them are converted into salts before being absorbed by plants. Some salts contain plant nutrients and are beneficial in the small quantities required for plant growth. Others contain no nutrients. All salts are harmful beyond the small quantity required for plant growth. A little is bad, more is worse, up to the point where plants will be killed. Salts are found in most water and are applied as fertilizer. Improper watering may permit a concentration into the harmful range. Instruments called Wheatstone's bridges are available which measure total soluable salts in terms of electrical conductivity or conductance. Many laboratories of the Agricultural Extension Service are equipped with Solubridge instru-

ments for use in assisting with soluble salt problems.

It has been found that when planting rooted cuttings, the Solubridge readings should not be higher than 40, while established plants do not withstand readings of 100 without showing some harmful effects. To remedy excess soluble salts, apply 2 to 3 gallons of water per sq. ft. and leach out this high salt content.



Laboratory Procedure Used in Developing Disease Free Cuttings

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### **Cultural Pointers**

#### PLANTING

Chrysanthemums grow equally as well on a raised bench or on a ground bed. The care is slightly different in that raised benches dry out more frequently during the summer and early fall months. It must be remembered that a good circulation of air is desirable, yet a direct draft is not advisable.

#### Planting Date

The proper date of planting will naturally vary according to when the crop is to bloom. For natural blooming we prefer to plant 3 or 4 weeks before the last pinching date. When flowering from August to October, we suggest you plant 3 weeks before the pinching date. In the year-around flowering schedule where no pinch is followed, we have given the advised planting dates in that schedule.

#### **Planting Rooted Cuttings**

Many florists are planting rooted cuttings directly into permanent locations. This not only reduces several handlings and production costs, but also produces a better-quality bloom. We fully realize that it is often an impossibility for all to treat their chrysanthemums this way. However, we have found that young, soft plants are superior to hard, woody plants. Never plant cuttings any deeper than what they were in the propagating media; too deep will cause stem rot. Water heavily after planting. If new white roots are not formed within the first 12 hours, something is not quite right.

#### Single-Stem or No-Pinch Method

Cuttings are planted and allowed to grow without pinching. It is an essential practice if 3 crops a year are to be realized in the year-around flowering schedule. Where crops are planted from September 15 to February 1, no-pinch method produces a superior crop, whereas a pinched crop is weaker and of poorer quality.

#### Light Intensity

When planting rooted cuttings into their permanent position, it is necessary to shade the glass or to put aster cloth directly over the young plants until they are established. When shading the glass, be sure that the material is applied lightly.

When growing quality chrysanthemums, the higher the light intensity or the least amount of shade over the plants during the growing season, the better the quality of bloom. For cloth houses, the amber Saran is superior to the green because of more light under the

amber covering. Naturally the plants require more water when growing under high light intensities.

It is recommended to shade the plants when flowers are about one-half open to prevent them from sunburning. When growing standards, a good practice would be to stretch muslin directly over the open blooms. This not only prevents sunburning but also keeps the blooms free from dirt.

#### **Distance of Planting**

For good quality pompons, we prefer to plant 7x8 inches or 8x8 inches pinched once, and thin the shoots to 3 per plant. The outside rows will support one more stem than the center rows in the bed. Nothing is gained by planting at a closer distance. Light intensity should be high at the base of the plant for quality blooms, and if planted too closely, we have lost the factor which promotes quality. Large-flowered varieties are generally planted 8x8 inches or 8x9 inches; this also applies to disbud anemone and single varieties.

For single stem, no-pinch method pompons should be spaced 4x6 and standards 5x6. When further spacing is used the sprays of the pompons become too large.

## PLANTING DISTANCE FOR NO-PINCH METHOD

Pompons Standards

4 x 6 inches

5 x 6 inches



Applying Additional Light to an Entire House

# Gloeckner The Exposition of Manual Thanual

# Cultural Pointers

For a good number of years, the reason for pinching was to regulate the number of stems on the plant. In recent years, we have learned that in the case of pompons or singles the pinching determines the type of spray formation. With standards, pinching will determine the type of bud formation, whether it be a crown or terminal bud.

#### Time Pinching

The precision culture of chrysanthemums is all set up around the "Last Pinch." To grow a quality pompon, you should receive the rooted cuttings sometime in June, July or August and then plant into the permanent location approximately 3 weeks before the date listed in our list of varieties under "Last Pinch."

Under the heading "Chrysanthemum Flowering Schedule" you will find the exact pinching dates for all planting dates. The table below will indicate the time to pinch after planting, according to various planting dates:

When planting Nov. 15 to Feb. 14 allow 4 weeks plant to pinch.

When planting Feb. 15 to Nov. 14 allow 3 weeks plant to pinch.

Time pinching standards will eliminate the formation of the crown bud and produce terminal buds which will in turn produce a much straighter flowering stem.

#### **Pruning**

Another important factor is to remove all shoots but 3 or 4 per plant. In a few instances only 2 shoots are allowed to mature. Allow more shoots to develop on the outside rows than on the center rows of a bed. When fewer breaks are selected, the planting distance should be closer. If you prefer to have a number of

smaller sprays, with fewer blooms open at one time, follow the double-pinching procedure.

Standards are usually pinched once to induce breaks so that they may be grown 2 per plant. The strongest breaks are selected and all others removed. It is well to pinch on the date suggested in the general list. Careful observation has shown us that neckiness with some varieties is eliminated by pinching on the respective dates. Singles and anemones are usually grown 3 to 4 stems per plant.

#### **Condition of Plant**

When pinching, remove only the soft growth, never cut into the woody stems as this will not produce the type of breaks you desire. It is our experience that it is best not to pinch until the plant has become well established in its permanent location. In all cases, it is better to have at least 8 to 10 inches of growth on the plants before pinching. (Photos below.)

When double pinching, pinch the first time 30 days before the "Last Pinch." This allows enough time to produce a growth long enough to pinch at the proper time.

If by chance you are delayed in planting, and your plants will be too tall, it is advisable to pinch early enough before benching so that the breaks will be several inches long at time of planting. Never pinch hard plants at the same time they are planted in the bench as a heavy loss may result. Better wait until plants are established and then pinch.

The last pinching dates given after each variety will help you grow that variety to excellency. Remember that pinching is just one cultural point and will only function when all other cultural points are carried out properly.



Well-Established Young Plant



Top Several Inches Removed



Strong Breaks Resulting from Single Pinch

# 3333 Cocknor To Stanthemin Manual

### **Cultural Pointers**

#### DISBUDDING

Large-flowered varieties produce side shoots in the axils of the leaves which should be removed very close to the base at regular weekly intervals. Disbuds are handled the same as standards.

#### **Taking Bud**

Taking bud means allowing the flowering bud to remain and removing all others and applies to standards and disbuds. The chrysanthemum usually produces two distinct types of flowering buds — Crown and Terminal. The first bud produced is called the crown bud and is distinguished by being surrounded by other lateral leaf buds. The second is the terminal bud and is surrounded by several flower buds. If the plant is planted especially early, a second crown bud may appear. In appearance, this second crown bud is exactly the same as the first.

The procedure of "Taking Bud" depends very largely on the variety. Usually the safest rule to follow is not

to select a bud on early or midseason varieties before August 25. In our list of large-flowered varieties under "Select Bud" you will find the date on which to select the proper bud. If bud is selected too early, a large percentage of the flowers will be crippled. Good common sense must be used to determine the proper selection of bud.

The formation of the crown bud usually does not take place when growing according to the "Time Pinch Plan." When following "Time Pinch," select the first bud that appears. This will result in straight stems without the dogleg growth that appears when second bud is taken.

The final selection of bud should not be made when the cluster buds are too small as this will very likely cause injury to the stem near the bloom. Likewise, it is not advisable to delay selecting the bud too long. Some growers like to leave an alternate bud until they are certain that nothing will happen to the one finally selected.

#### DISBUDDED SPRAY

The procedure in growing disbudded sprays is to wait until the crown bud forms, then remove all but three vegetative shoots. Later, when terminal buds appear, disbud each shoot similarly to the normal disbudding of standards. When the blooms mature, there are three flowers on each spray. In singles and anemones, the size of the blooms will be a trifle smaller than when they are grown as one flower per stem. Raise 3 stems per plant, similar to straight disbud. Varieties such as

Goldsmith, Valencia, etc., can be grown as disbudded sprays.

Good chrysanthemums result from the careful thorough practice of the basic principles of plant growth, plus the acknowledgment of certain differences in the nature of various varieties. Growing disbudded sprays is a modification in culture which is very much worthwhile.



Early or Crown bud surrounded by lateral buds



Late or Terminal bud surrounded by flower buds



Late or Terminal bud selected

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### **Cultural Pointers**

#### WATERING

The knowledge of proper watering is essential to success. Chrysanthemums produce extremely heavy foliage, and a great deal of water is required at the roots. And under ordinary conditions of bench culture, overwatering would be difficult. When grown in beds, more care should be exercised in watering. Some soils look wet on the surface but are very dry several inches below.

When planting rooted cuttings directly into their permanent locations, it is essential to water thoroughly to set the soil around the plant roots. We suggest double watering again when the soil gets on the dry side. By this time, the plants are established and regular watering should be followed. Keep humidity in the house by wetting down bench and walks.

Steam sterilization causes the soil to become more granular, and capillary movement of water in it is much slower than in soils not steamed. Cuttings planted in it cannot obtain water readily, and for this reason should be kept more moist than in soils not sterilized.

#### **Surface Watering**

During the past several years, many labor-saving devices have been developed. Surface watering is one that will save many hours of hand watering your chrysanthemum crop.

The Skinner Superior nozzle is the final answer to the exacting requirements of surface watering. An absolutely flat uniform spray is obtained over a full circle with a constant pattern under any pressure. This nozzle throws a fine spray 5 feet in diameter at 5 pounds pressure at the nozzle, and uses 0.9 gallons per minute.

When installing surface watering, check your water supply and the capacity needed to irrigate your area. It is advisable to have an engineer figure out your requirements.

#### Leaching

Many greenhouse soils are excessively rich, and chrysanthemums will not thrive in such a medium. If this is the case, the remedy is leaching with water. After the soil is sterilized, it should be leached. Use a Skinner line and allow it to run for hours if necessary. Raised benches do not require as much water to leach.



Superior Nozzle Showing Uniformity of Pattern

#### GRAFT INDEXING

Graft indexing to eradicate stunt has become standard procedure with Yoder Brothers, Inc. This was made necessary by the fact that certain varieties express visual symptoms of the virus much more readily than others. There are some varieties which are seemingly tolerant to stunt and which have never been known to express clear-cut symptoms of stunt virus. Others, such as Blazing Gold, for example, will indicate the usual symptoms very readily. In order to check those which do not express the usual symptoms readily, the technique of graft indexing was developed whereby a variety such as Blazing Gold serves as the understock and the variety to be checked for virus is grafted on to Blazing Gold. By this method, it can be told

within 2 months whether stunt virus is present or not. By making selections in this manner, it is possible to eventually select out mother stock of all varieties, and by careful isolation practices, maintain them stunt-free. Until this is accomplished, there will be the chance that certain few varieties, although they do not show any symptoms, may be carriers of the virus and act as sources of infection for other varieties.

Several other virus expressions have made their appearance since stunt. You probably have heard of Mosaic, Aster Yellows, Rosette and Asperimy. Fortunately, by the use of the above technique, these are isolated early, before any of them will have become so widespread as to cause any great difficulty.

### **Cultural Pointers**

#### TEMPERATURE AND LIGHT

Chrysanthemums grow most rapidly under conditions of high light intensity and with a temperature above 60 degrees Fahrenheit. Shading to reduce the light intensity is very rarely needed. Usually shading on the glass is more beneficial to the workers than it is for the growth of the plants. However, if shade is used it should be removed by August 15.

Temperatures much above 90 degrees will act as a prohibitor. When the night temperatures are in the 90's, bud development is hindered. This is especially true when black-clothing in the hottest part of the year. To reduce high temperatures under the black cloth, it is suggested that the sides of the cloth be lifted after sundown and dropped again before the sun rises in the morning. During high temperature periods, it is much better to apply the cloth later in the afternoon and allow it to remain later in the morning.

Temperature has been responsible for peculiar types of flowers. The Indianapolis varieties develop quilled and flat blooms when allowed to develop under low temperatures. Many varieties will develop black centers in the flower when grown under high temperatures

and low light intensity.

Pink and bronze colors just do not develop when the temperatures are high in the early stages of flower development. If good color is desired in pink and bronze varieties the night temperature should be 50 to 55 degrees during the development period. High light intensity and low temperatures are conductive for good color development. Many of the newer varieties will develop better color during hot summer months than the older varieties. Low moisture during the period of bud development intensifies the color. The pinking of white varieties and the bronzing of yellow varieties results as the flowers develop at low femperatures.

#### Blindness

Blindness is associated with temperature. When plants are grown below 50 to 55 degrees during the bud in-

itiation period, many varieties will produce blind growth. In "Year-Around Flowering" we have found that chrysanthemums should be grown in a 60-degree temperature to insure good bud development. However, there are some varieties which require a higher temperature, and there are likewise varieties that will initate their buds at a lower temperature; but it is safe to recommend a 60-degree temperature. Cornell workers found that growing the stock at different temperatures will affect the flowering of some varieties.

#### Petal Burn

When blooming chrysanthemums during high temperatures and high light intensity, it is advisable to cover the beds with a cheesecloth stretched about 18 inches above the top of the developing blooms. This covering will also help keep dirt off the open blooms. Sunburn sometimes is confused with flower ray blight, which is caused by Botrytis. Botrytis is more abundant during periods of high humidity and low temperatures. Ray blight can be controlled by spraying with Parzate when the color shows and then repeating the application every 5 days.

#### **Shipping Flowers**

Packing of cut flowers should be carefully studied. The most common error is over-crowding in the shipping boxes. Not securely fastening the blooms in the box will cause bruising of the petals. Cleating or sewing the stems to the box is essential. Cushion the blooms by placing enough padded paper on the bottom of the corrugated box and between the layers of blooms. Wrap the pompons with a loose wrapper. The wrapping paper could have the name of the grower printed on it. Chrysanthemum "Saf-Pak" are very helpful in shipping standards to market. One dozen blooms are held securely in one "Saf-Pak" holder.

Long distance shipments carry better if the cut flowers are packed dry. Reduction of temperature is



Packing Shed with Ample Room

# Gloeckner To Establish Manual Chrysantheming Manual Comments

### **Cultural Pointers**

#### Supports

With high labor costs, it has become necessary to eliminate some of the labor in supporting standards and disbuds. The old way of supporting with stakes or stringing each plant has given way to the box-wire and cross-string method of support. Turn-buckles placed near the end of the bed will keep the wires much tighter. Some growers are only using one layer of wire and cross strings and are gradually raising it as the crop grows. Many still use two layers of wires and also raise the top wire as the crop grows.

Pompons are usually supported by the string and wire method similar to that described above. Two layers of wires are necessary to give the pompons good support. When growing out-of-doors or in cloth houses, heavier wire is necessary to give proper support, because moisture often collects in the open blooms causing extra weight.

#### Southern Culture

It is true the material presented in this manual is primarily from experience gathered for the northern part of the United States. Yet many of the pointers are similar for all parts of the country.

We have noted that the early-flowering varieties from October 15 to November 1 flower approximately one week later in the southern states, while those flowering naturally November 15 to December 1 bloom one week earlier than the dates given in this manual. Last Pinch dates will have to be governed accordingly.

When shading, it has been suggested that the black cloth be placed on the beds late in the evening, 7 or 8 p.m. and left on until 8 or 9 a.m. Shading the usual time traps the excessive heat under the cloth and ap-

pears to affect foliage and flower buds. Pink and bronze varieties used for shading and early normal production fade to inferior colors.

During the months of July and August, little growth may be expected, therefore fertilization should be kept to a minimum. When the nights get cooler in September, October and November, growth is more rapid, and the fertilization program should be stepped-up accordingly.

The young plants should be illuminated until May 1 to prevent premature flower buds.

The length of day is constantly changing. In Ohio the shortest day has 9 hours of light, while the longest day length is 15 hours. In Florida, it varies from 10 for the shortest and 14 for the longest. In Ohio, the day length will change about 15 minutes each week.

#### **Cloth Houses**

Much has been written about the construction and care of the cloth house. It seems that this subject is well taken care of, although there are a few new ideas that should be mentioned.

To grow quality stock, it is necessary to use some type of covering such as aster cloth, onion bag or Saran. Saran is manufactured by Dow Chemical Co. and is a plastic that will outlive copper screening. There are several colors of this material, and the natural-colored Saran produced better quality pompons than did the green-colored material. The ambercolored Saran allows more light to reach the plants. The plants growing under natural-colored Saran required twice the amount of water as did those under the green cloth. The important difference is that higherquality stock was produced under the natural-colored Saran.



# Glockner To Stanthenium Manual

### Insects and Their Control

#### Aphids, or Plant Lice

All aphids are true sucking insects that insert their beaks through the surface of the leaf or stem and extract the juices from within.

INJURY. The feeding of aphids causes the plants to become sickly and stunted. The leaves curl inward, and when the flower terminal is infested, the blooms will be deformed. Certain varieties of chrysanthemums are more susceptible to attack than others.

CONTROL. Nicofume Fumigation is an easy method of controlling the black aphid but will do very little to control the green or straw-colored aphids. Lindane or Parathion is much more effective on the very resistant green or straw-colored aphids. Vapotone is also effective when used at higher concentrations. Malathion good for control of aphid and spider mite.

#### **Chrysanthemum Leaf Miner**

The larva or maggot disfigures and weakens chrysanthemum plants by mining in the leaves. It may do considerable harm to the crop, but is easily held in check.

INJURY. The young maggots burrow in the leaf tissue, leaving the upper and lower surfaces intact. The tunnels are irregular and winding. White blotches are thus formed, which later turn brown, and the leaves may die.

CONTROL. As soon as it is noticed that any leaves are infested, they should be picked off. Parathion or

TEPP aerosol bombs or sprays, containing Lindane, Chlordane or Parathion, are very effective.

#### Chrysanthemum Midge

The chrysanthemum midge is one of the most serious pests with which the grower has to deal. Under optimum conditions, a little over a month is required to complete the life cycle from the egg to the adult. The eggs are reddish-orange in color and are usually deposited on the tender tips of the growth. Under favorable conditions, the eggs hatch in about three days. The larva wanders about over the surface of the leaf for a day or two before finally penetrating into the leaf.

INJURY. The midge attacks all parts of the plant but prefers the tender growth. If the infestation takes place when the plants are small, they fail to grow, although if the plants are well-developed when the infestation starts, the buds blight or are deformed, and the plant is rendered unsalable.

CONTROL. Lindane is effective against young and adults.

Parathion aerosols effective, but require frequent applications.

**DDT** effective against adults—repeated applications necessary.



Aphids



Midge Injury

# Gloeckner Chrysanthemin Manual Chrysantheming Manual Chrysantheming

### Insects and Their Control

#### Corn Ear Worm

The corn ear worm is a green to brown, nearly smooth caterpiller often mistaken for a cutworm when found within the buds or on the open flowers.

INJURY. It is very destructive to the opening buds, for it feeds on their petals and other parts, deforming if not entirely ruining the flowers.

CONTROL. If the attacked plants are blooming, spraying is out of the question, but thorough treatment with a 3 or 5% D.D.T. dust is recommended. After they have worked their way into the buds and are found to be feeding on the open flowers, hand-picking is the only remedy. Spraying the plants with Deenate 50W will control them before the color shows. Parathion fumigation will also keep them under control.

#### Cutworms

The larva is dull colored and from one to more than 2 inches in length. They are most active at night, and usually spend the day coiled up just under the surface of the soil at the base of the plant. They should not be confused with the corn ear worm, which cannot be controlled by poison baits.

INJURY. Cut worms obtain their food by biting out sections of the leaf, stem or bud. Various species attack different parts of the plant. The one that is most damaging climbs to the top of the stem and eats into the flower buds.

CONTROL. Those cutworms that feed on the foliage can best be controlled with Deenate 50W spray using 11/2 pounds to 100 gallons of water. Parathion

has been suggested as a good control measure and is more effective as a spray.

#### **Greenhouse Leaf Tyer**

It gets its name from its habit of spinning light webs inclosing 2 or more leaves or tying together the parts of a single leaf. This caterpillar is very active, and when disturbed, will wriggle off the leaf, often backwards, lowering itself on a silk-like strand.

INJURY. When first hatched, the larvae eat out shallow holes on the under side of the leaf. As they grow, they enlarge these holes but usually do not cut through to the upper surface. The result is that the leaves become skeletonized.

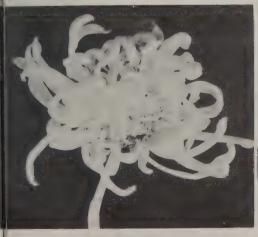
CONTROL. The best poison to control the larvae is Deenate 50W, either in the form of a dust or a spray. For liquid spray use 1½ pounds of Deenate 50W to 100 gallons of water. Regular fumigations with Parathion will keep the leaf tyer under control. The leaf roller is best controlled with Parathion or TDE. TDE (Rhothane) is closely related to DDT and it is used at the rate of 2 pounds of 50% wettable powder to 100 gallons of water.

#### **Mealy Bugs**

Mealy bugs are small, sluggish, whitish, soft bodied insects, measuring up to one-quarter inch long, found in clusters on the undersides of the leaves or in the leaf axils.

INJURY. This pest sucks the juices from the stems and leaves, discoloring and deforming the foliage.

CONTROL. Parathion or Dithio are the most effective.
Repeated applications necessary.



Corn Ear Worm Damage



Leaf Tyer



Mealy Bugs

# Schoockner To Stantifienium Manual

### Insects and Their Control

#### Mites

Cyclamen mite and broad mite are often found on the same plants at the same time. Broad mite could pass through a complete generation in 4 to 5 days at 70 to 80 degrees, while the cyclamen mite will take 4 to 5 times longer.

INJURY. Infested leaves become deformed, curl from the outside inward, and wrinkle so that pockets and pit-like depressions are formed. When the infestation is severe, the mites collect about the buds, causing them to blight. Oftentimes white varieties will show occassional red petals.

CONTROL. Parathion dusts or sprays are more effective than bombs. Vapotone containing HETP has given good control. Sodium Selenate is effective when applied in liquid form one-quarter gram per sq. ft. after plants are well established. P40 used at the rate of 3 pounds per 100 sq. ft. is another way to use Sodium Selenate. Systox used as a soil drench has been found effective in mite control.

#### **Red Spiders**

There are several species of red spiders that attack the chrysanthemum. They vary in color through yellow, orange and red. The body is oval in outline and bears 8 well-developed legs.

INJURY. Red spiders pierce the epidermis of the leaf and draw the liquid contents from the cells, causing the leaf to turn pale around the injured portion. They prefer to collect on the under surfaces of the leaves, which they cover with silken threads.

CONTROL. Parathion or TEPP bombs are most effective and easiest to apply. HEPT or TEPP contained in insecticides such as Vapatone are by far the most effective on red spider. Moisture is detrimental to the development of the red spider, and frequent syringing washes them and their eggs off the plants. Sodium Selenate is effective when applied in liquid

form one-quarter gram per sq. ft. or P40 at 3 pounds per 100 sq. ft. after plants are well established; especially desirable for cloth house operators, will also control foliar nematodes. Systox emulsion used as a soil drench has also been found effective in mite and aphid control on outdoor plantings. Plantfume 103 smoke generators and Fulex Parathion Fumigators are simple to use and very effective. The latest control is ARAMITE 15-W. Dithio is much safer than other insecticides when used on open flowers.

#### Symphylids

Symphylids are small white creatures about oneeighth to three-sixteenth inches long. About 40-60 days are necessary for the completion of the life cycle.

INJURY. Symphylids destroy the fine root hairs and small rootlets, thus stunting the plants and often killing them outright.

CONTROL. Complete control can be obtained with Lindane applied to the soil. Lindane can be applied to the surface of the soil either as a dust or as a wettable powder in a convenient amount of water. Application can be made when plants are in the bed, but best results are obtained if the insecticide is worked into the soil prior to planting. Use Lindane 25W at the rate of 6 ounces per 1000 sq. ft. or 1% Lindane dust at the rate of 10 pounds per 1000 sq. ft.

#### Sowbugs

INJURY. Sowbugs often become so plentiful in the greenhouse that they eat the newly-planted cuttings at the base.

CONTROL. Any of the many poison baits will give partial control, but a complete spraying with DDT under the benches has given excellent control. Deenate 50W will give complete control.



Mite Injury



Red Spider Injury



Symphylid. Above, adult — below, eggs and young

## Gloeckner Chrysanthemium Manual W

### Insects and Their Control

### **Tarnished Plant Bugs**

The tarnished plant bug or sting fly comes into the greenhouse through open doors and ventilators in late summer or early fall and does considerable harm to this crop. Chrysanthemums growing in the open are frequently affected. Varieties such as Mary L. Hall and Sea Gull are attacked to a greater extent than other varieties.

INJURY. It has sucking mouth parts and obtains its food by inserting its long, slender beak into the plant tissues and sucking up the contents of the injured cells, apparently injecting saliva, which causes the death of the tissue in the immediate vicinity. The stem is often slightly bent, and the terminal growth is malformed because of this injection.

control. Early morning spraying or dusting with any of the pyrethrum materials will kill those bugs that are present but this will have to be done each day for complete eradication. Deenate 50W has been giving fair control, but again this insecticide is best used as a contact. Parathion fumigation will control this insect in the greenhouse.

#### **Termites**

Termites are not ants, though often called white ants. The food of termites is wood or cellulose. Soil inhabiting forms are the most common in the greenhouse.

INJURY. Termites sometimes injure chrysanthemum plants by working up the center of the plant and

hollowing out the stem. This injury will eventually kill the plant.

CONTROL. Clean up all wood debris in soil. Replace old wooden benches. Keep wooden bench supports from direct contact with the ground.

### **Thrips**

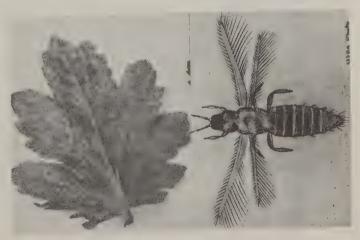
The chrysanthemum is usually attacked by one or more species of thrips. These small, narrow-bodied, active insects which range in color from yellow to brown or almost black, injure both the leaves and the blossoms. Thrips are a real threat to Florida mum growers.

INJURY. Thrips have mouth parts that are fitted for piercing and scraping the leaf surface and for sucking the juices and other cell contents. The upper surface of the foliage is covered with whitish blotches, while minute black specks appear on the lower surface. Unless a constant watch is kept on the plants and control measures are properly executed, thrips are capable of causing severe injury within a short time.

control. Deenate 50W used at the rate of 1 pound to 100 gallons of water is a very effective control. Other insecticides containing Lindane are also recommended. Parathion will control the chrysanthemum and onion thrips. Regular dustings or spraying are necessary where infestation is heavy. Chlordane is also very effective.



Tarnished Plant Bug



Thrip Injury

Adult Onion Thrip

## Speckner To Stanthemin Manual

## Pests and Their Control

### **Foliar Nematode**

The spread of this pest has been very rapid in recent years owing to the increased trade in chrysanthemums and the ease with which the nematode is transported in plants and cuttings. Too few growers have become familiar with this pest, and consequently no effort has been put forth to control it.

SYMPTOMS. The leaves attacked become blotched, turn at first greenish-yellow, then brownish, later gray and finally black until the entire leaf dies and hangs down on the stem. Under conditions of high

humidity both in the open during a wet season and under glass due to excessive watering, the spread of the pest may be extremely rapid.

CONTROL. P40 applied at the rate of 3 pounds per 100 sq. ft. has given good control. Wait 2 to 4 weeks after benching before applying. It is better to apply P40 in 2 applications, 1½ pounds each time, 7 to 10 days apart. The latest findings show that foliar nematodes can be controlled with Parathion either as an aerosol or liquid spray. Systox emulsion applied as soil drench 2-4 weeks after planting is effective.

## Diseases and Their Control

### **Bacterial Stem Rot**

SYMPTOMS. Cuttings may appear healthy although infected, grow well up to 8-12 inches high when the stem becomes soft and off-colored. Pith is jelly-like or lacking in such stems. Tops of plants then turn black, exude drops of liquid, and the stem often splits. Develops at high temperatures (75-90 degrees). Often shows up after the plants are pinched.

CONTROL. Remove and burn immediately all affected plants. Wash hands thoroughly after handling plants. Steam infested soil before replanting. Avoid dips for cuttings.

### Collar Rot or Stem Rot

SYMPTOMS. The area of stem just at the soil level will show dark colorings first. The entire stem will be girdled, and eventually the plant will turn yellow and die. Usually caused by the common damping-off organisms such as Rhizoctonia, Fusarium or

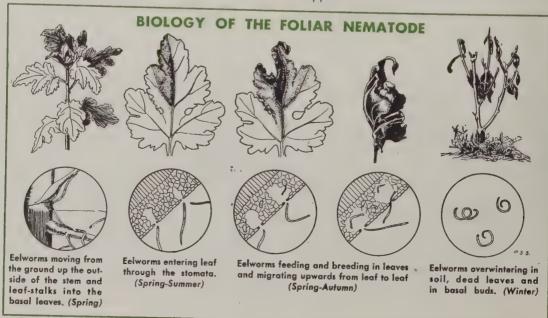
Pythium. More prevalent when temperature and humidity are high.

CONTROL. Do not plant cuttings that have been affected with damping-off. Remove all affected plants when noticed. Do not keep the soil too moist. Run a lower humidity if possible. Plant cuttings no deeper than depth they were in propagating media, as too deep planting will hasten development. Have soil well prepared, as compact soils will also encourage trouble.

### Mildew

SYMPTOMS. Whitish powdery growth on upper surface of leaves.

CONTROL. Spray at regular weekly intervals with a good Wettable Sulfur, 1½ pounds per 100 gallons of water to which a good commercial spreader has been added. Spray with Iscothan 4 ounces per 100 gallons of water plus spreader whenever disease appears.



## Gloeckner Chrysanthemum Manual W

### Diseases and Their Control

### Ray Blight or Flower Spot

SYMPTOMS. The petals first show little spots and then the entire petal begins to rot. May be caused by Botrytis or Ascochyta. Botrytis is spread primarily by splashed water.

CONTROL. It is controlled by lowering humidity or spraying plants with Parzate when they show color. Spray with Parzate one ounce to 4 gallons of water plus one-third teaspoonful of Du Pont Spreader Sticker on the flower from below and above as soon as color shows and continue at 5-day intervals. Orthocide 50W one ounce to 4 gallons of water plus spreader used as a spray similar to Parzate was found a good control. An electric fan, placed above the plants will circulate the air sufficiently to reduce disease.

### **Root Knot Nematode**

symptoms. The nematodes or eelworms bore into the roots of the plants and cause knots or galls to develop on the root systems. As a result the plants are weak, yellowish and stunted in growth.

control. Steam sterilization of the soil is very effective in eliminating the nematodes. Dowfume G is a good soil fumigation that will kill nematodes and not do any damage to the surrounding plants.

#### Rust

SYMPTOMS. Chocolate brown powdery pustules on lower surface of the leaves.

CONTROL. Parzate, one ounce to 4 gallons of water is most effective.

### Septoria Leaf Spot or Leaf Blight

SYMPTOMS. Distinct circular spot on the leaves. These are greyish-brown in color and become brittle in the center. Affected leaves may turn yellow and die. More prevalent in the open. Some varieties are more susceptible than others. Sea Gull is very susceptible.

CONTROL. When cuttings are received, dunk the tops into Fermate (2 tablespoonfuls to a gallon). Spray the plants with Parzate one ounce to 4 gallons of water plus one-third teaspoonful of Du Pont Spreader Sticker every 10 to 14 days. Cloth house mums should be kept covered until the buds can be seen.

### Verticillium Wilt or Seidewitz Disease

SYMPTOMS. Margins of leaves turn yellow and eventually wilt or dry up. This begins at base of plant and works up the stem. May affect one side of a stem or plant more than the other. No distinct spots. Varieties vary in resistance to this disease.

CONTROL. Verticillium wilt can be avoided by purchasing our disease-free cuttings produced from cultured stock. It is also necessary to plant only into sterilized soil.



Dodder Growing on Mums



Septoria Leaf Spot

## 333 Cocknor-To Chrysanthemin Manual

### Pests and Their Control

### **Viruses**

The word "virus" is being referred to by the medical profession as well as by the florists, and a short explanation of virus should prove of interest.

Viruses of the chrysanthemum are considered to be infectious; that is they can be transmitted to a healthy plant only by contact with an infected plant. They are not carried in the soil, water or air as are other diseases caused by fungi and bacteria.

The virus particles cannot be seen by the most powerful microscopes. Most of them will pass through bacterial filters. They respond like living organisms. They are always present in the sap of diseased plants and can be transmitted to a healthy plant through wounds or by mechanical means. The chrysanthemum is known to be affected with 5 viruses, namely yellows, Aspermy, rosette, mosaic and stunt. Stunt is the only one that has caused much concern. It has been found that aphids as well as mechanical handling will cause stunt to spread.

Once a plant is infected with a virus, it usually always remains affected. To define a virus, the following is as good as any: A virus is a protein which requires the presence of living cells for multiplication and it causes changes in the structure and functions of living cells.

### **Combination Sprays**

At times it is more economical and convenient to mix two or more sprays and apply them in one operation. Before such mixtures are prepared, the grower should be sure no reaction harmful to the plants will occur, and that the efficiency of the separate ingredients is not reduced. Consult your State Entomologist or Plant Pathologist for information on combination sprays for specific crops.

A good combination spray for chrysanthemums which will control most diseases and insect pests, can be made with Parzate, DDT and Vapotone. Details on dilutions are as follows:

Material	Amount to Make						
Water	100 gallons	20 gallons	3 gallons				
DuPont Spreader Sticker Parzate Deenate 50W *Vapotone	6 oz. 1½ lbs. 1 lb. ½ pt.	2 tablesp. 5 ounces 1/4 lb. 31/2 tablesp.	1 teasp. 2 tablesp. 1½ tablesp. 1½ teasp.				

To prepare: (1) Measure out spreader and dilute in small amount of water. (2) Fill tank with required water and add the diluted spreader and stir. (3) Take out a small amount in jar, add the proper amount of the Parzate and shake vigorously until all the powder is thoroughly wetted. (4) Pour this mixture back into the tank, preferably through a fine screen or cheese-cloth and stir. (5) Measure out Vapatone and dilute in small amount of water and add to the tank. Keep stirring or keep agitator running while adding the materials.

### Dodder

SYMPTOMS. Dodder is a parasitic twiner, bearing clusters of small flowers. They are leafless annuals, with very slender yellow, white or red stems, which become attached to the plant by means of root-like suckers. Dodder is occasionally found on chrysanthemums and will cause a complete loss of crop.

CONTROL. Dodder is common in low, weedy places and may be carried into the greenhouse in the soil or manure. Soil sterilization is the only prevention. After dodder is attached to the plants, remove the affected plants and burn.



Stunt in Variety Harvester

<sup>\*</sup>Parathion, 15% wettable powder may be substituted for Vapatone and used at the same rate as Parzate, 1½ pounds per 100 gallons; 5 ounces per 20 gallons and 2 tablespoonsful per 3 gallons.



## New Chrysanthemum Varieties

### WHITE POMPONS, DECORATIVES, SINGLES & ANEMONES

#### MARSHMALLOW

Oct. 5

Heavily petalled pure white daisy. Improves the growth and durability of Chris. Columbus. Recommended as a garden variety and Mother's Day pot plant. Dwarf, compact plant.

SILVERTONE Oct. 2

Intermediate white daisy. Similar in habit to Reward and Buckskin. August and September cloth house and May through October in the greenhouse.

SILVER CLOUD Nov.

Intermediate white single. Heavily petalled, better form than Halo. A good producer. Recommended April through October with use restricted to the greenhouse.

FREEDOM Nov. 5

Intermediate pure white single. Outstanding for spray formation and flower substance. Clean vigorous growth; improves Halo in all respects. Recommended for August and September cloth house, and May through November in the greenhouse. Excellent shipping and keeping qualities.

WHITETOP Nov. 5

Intermediate pure white decorative. Vigorous growth habit.

Recommended April through November in the greenhouse and August through October in the cloth house; also as a medium-sized disbud for pots. It fills the need for a pure white pompon in the greenhouse during the spring months when Encore is difficult to flower.

**PACESETTER** 

Nov. 10

Intermediate pure white single. Good form, petallage and substance. Excellent shipping quality. Growth is short and strong. Excellent for spring, summer and fall. A very fine pot plant disbud.

ILLINI STARLET

Dec. 10

Intermediate white anemone. Improves Garza in form, growth and clarity of color. Good production and much freer growth. Believe this is a white anemone that could replace Garza.

TRENTON Dec. 15

White pompon. Good form and substance plus production. An important pompon for natural flowering.

TALMEDA Jan. 5

Intermediate white pompon. Improves Revelation. Just about latest white pompon. Good form and substance.

### YELLOW POMPONS, DECORATIVES, SINGLES & ANEMONES

### LEE POWELL

Oct. 10

Large golden yellow decorative. Vigorous plant. Showy. Fine for disbudding. Outstanding garden variety. Promising for outdoor cut flower and spring pot plant.

ARLORA Oct. 15

Large, soft yellow, closely incurved flower. Very good substance; Flower  $3^{\prime\prime}-3^{\prime\prime}2^{\prime\prime}$  in diameter. Should prove good spring and fall pot plant.

CREAMPUFF Oct. 20

Intermediate cream white single. Strong fast growth and very heavy production. A beautiful new color for April through June. Excellent in the late September and October cloth house.

ORDALIA Oct. 25

Deep golden yellow, semi-incurved decorative. Size 3''-31''. Excellent keeper. Very vigorous and bushy growth. Blooms in the garden in October. A large pot plant disbud.

STARLIGHT Oct. 25

Large yellow daisy. Improves the growth and production of Starbright. Very durable; uniform response. A 9-week Yellow Valencia. Recommended April through October in the greenhouse. Natural or disspray. Makes a fine disbud in pots spring and fall.

AZTEC Oct. 28

Intermediate deep yellow daisy. Strong wiry growth and heavy production. Especially valuable for high temperature flowering. Recommended May through October in greenhouse and, August and September in cloth house. Greatly improves existing 9-week yellow daisy varieties in production and flower auglity.

SAUTERNE Oct. 30

Intermediate intense yellow single. Very uniform response tolerating a wide temperature range. Improves the production, petallage and quality of Yellow Halo and other existing yellow daisy varieties. Recommended May through October in the greenhouse, August through October in the cloth house.

GONDOLA Oct. 30

Intermediate yellow daisy. Outstanding form and color. Quite large flower similar to Starbright. Recommended May through October in the greenhouse and in the cloth house. Very durable with fine petallage and substance.

HONEYMOON Nov. 4

Large yellow daisy. Good form and an unusually clear yellow color. Recommended May and June in the greenhouse, and August and September in the cloth house.

YELLOW PARAMOUNT

Nov. 23

Deep yellow sport from Paramount. Same habit as original variety.

YELLOW FORTUNE

Dec. 1

Deep yellow sport from Fortune. Same habit as original variety.

YELLOW SNOWCAP

Dec. 15

Deep lemon yellow sport from Snowcap. Same habit as original variety.



## New Chrysanthemum Varieties (cont'd)

### BRONZE & RED POMPONS, DECORATIVES, SINGLES & ANEMONES

BUCKEYE

Oct. 3

Intermediate salmon bronze pompon. Dwarf, compact, very sturdy growth. Striking new color well suited to the garden and Mother's Day pot plant program.

MOONMAID

Oct. 14

Intermediate salmon bronze pompon. A new and useful color with good growth and production. Late garden variety or outdoor cut flower. Recommended for spring and fall flowering.

TALISMAN

Oct. 20

Talisman bronze; intermediate daisy. Color holds exceptionally well. Recommended April through October in the greenhouse and August and September cloth house.

PARADISE

Oct 20

Intermediate coral red single. Color holds well. Recommended April through mid June in the greenhouse, mid August through October in the cloth house. A tall variety of outstanding new color.

**PALETTE** 

Oct 2

Intermediate dark salmon single. Heavy petallage with good substance. Fine in spring and fall. A new pastel shade.

GAIETY

Oct. 25

Intermediate coral bronze single. This variety in combination with Paradise and Prelude constitute a trio bred to widen color range adding new and lively pastels especially valuable in the spring. Good growth and production. An exciting new color.

HILARITY

Nov. 1

Intermediate golden bronze single. Small daisy of wide petal and very lively color. Tolerates a wide range of conditions. Recommended May through October. Growth habit lends itself to pot culture.

FLAME GLOW

Nov. 5

Intermediate golden orange single. Fine growth and production.

ORANGE BEAUREGARD

Nov. 5

Lively, light orange or golden bronze sport from Beauregard. Valuable in a continuous year 'round program. In the early cloth house or under high temperature conditions it is a deep golden yellow pompon. Growth habit and response is same as that of Beauregard.

RED KING

Nov. 13

Intermediate Red Daisy. Good growth and production; short, compact plant with compound spray. A good red pot plant variety.

CADET

Nov. 14

Intermediate red anemone. Short, compact and free breaking. Approximate size of Gypsy. Recommended as a spray but useful as a disbud. Season is October through March, especially effective at Thanksgiving and Christmas. A pot plant variety.

ILLINI REDWOOD

Nov. 25

Intermediate red pompon. Hard, durable, well formed flower. Fine red pompon for Thanksgiving.

### PINK POMPONS, DECORATIVES, SINGLES & ANEMONES

PETRISIAN MAUVE

PETRISIAN PINK
PETRISIAN ROSE

Oct. 5

These are three outstanding hybrids for the garden and spring pot plants.

SONNET

Oct. 14

Intermediate salmon pink pompon. Stocky compact growth; well adapted to the garden and a good spring pot plant. Valuable color in late September cloth house.

BETTY

Oct. 14

Intermediate light salmon pink decorative. Upright cut flower growth; suitable for gardens. Well known for outstanding color.

**FAIRYLAND** 

Oct. 15

Intermediate decorative; lively pink color. Very uniform response. A low temperature variety that improves Carolyn Yosick; also a spring and fall pot plant. Recommended in early cloth house and as a garden variety.

MAYFAIR

Oct. 15

Intermediate, smooth pink single. Growth and production surpasses that of Reward. Uniform flowering response. Valuable for cut April through October in the greenhouse and, July through October in the cloth house. A much needed color in a cloth house daisy.

JESTER

Oct. 15

Intermediate, dark, orchid pink single. Very early variety with free vigorous growth.

CITATION

Oct. 15

Intermediate pink pompon. Dwarf, compact but very sturdy growth. In color and growth it improves Queen of Pinks. A pot plant disbud. Recommended April through June and again in October. One of the best late garden varieties.

MIRTI

Oct. 20

Intermediate light pink single. Larger than Reward. Especially valuable in spring flowering April through June. Durable and uniform response in July through October in the cloth house.



## New Chrysanthemum Varieties

### PINK POMPONS, DECORATIVES, SINGLES & ANEMONES—Cont'd.

PRELUDE

PINKETTE

Oct. 24

COVER GIRL

No. 10

Intermediate coral pink single. Clean growth habit. A beautiful pastel color, extremely effective under artificial light. Recommended flowering period April through June, and mid September through October cloth house and greenhouse.

Oct. 25

Intermediate pink pompon. A bread and butter variety to grow with Keepsake and Gold Coast. Recommended for May and June, and again in September and October in the greenhouse; also, August through October in the cloth house.

VOGUE Oct. 25

Large pink single. Beautiful form and substance. Especially valuable June and July. Rigid growth habit. Improves Ballerina and Soprano. Good in August-September cloth house.

BLUE CHIP Nov. 1

Intermediate pink decorative. Vigorous growth and heavy production; very pleasing color. Recommended May and June in the greenhouse, and August through October in the cloth house. Also a good spring pot plant disbud.

LOTUS Nov. 3

Intermediate pink pompon. Mary McArthur growth; a high quality flower for the shading program.

TEMPO Nov. 3

Intermediate deep pink decorative. A 9-week Masterpiece. Rigid stem; very hard, durable flower. Recommended April through June in the greenhouse, and August and September in the cloth house.

PORTRAIT Nov. 8

Large pink pompon. Very heavy producer of beautiful high quality flowers. Growth is strong, compact with excellent sprays. A versatile variety that can be grown anytime 10-week varieties are used. Also responds well to partial disbudding. Tolerates a lower minimum temperature than Pandora. Excellent pot plant March through December.

PENNANT Nov. 10

Intermediate pink decorative. A dark pink Masterpiece; fine form and substance. Tolerates low temperature well. Vigorous growth. Recommended April through October in the greenhouse, and August through October in the cloth house.

Light pink anemone with salmon pink cushion. Good color and form. Short, compact growth with good production. For cut flower and pot plant use.

NOBILITY Nov. 10

Intermediate light pink single. Very flat form. Medium to tall with free, easy growth. A quality daisy. Recommended May, June, October and November in the greenhouse, and August through October in cloth house.

CAROLE Nov. 15

Light pink anemone with salmon pink cushion. Resembles Majorette. Definitely smoother color plus more substance.

POLKA Nov. 20

Intermediate pink anemone. Essentially a pot plant; equally valuable as a spray or disbud. Beautiful form and color. Compact growth. Recommended October through June.

Nugano Nov. 20

Intermediate pompon. Excellent growth and production. A high quality flower. One of the most important pink pompons for this season.

DARK PINK MAJORETTE Nov. 20

Dark sport of Majorette. Lively, intense color. Same habit as original variety.

ILLINI FORMAL Nov. 23

Intermediate rose pink pompon. Fine growth and production. Excellent substance. Flowers for Thanksgiving. Very novel form that should be popular.

PINK CLOUD Nov. 25

Light pink decorative. Greenish overcast until mature; very fine form and substance.

ARGYLE Dec. 10

Small pink pompon. Fine clean growth; hard flower plus very acceptable pink shade. An outstanding late pink pompon.

### YELLOW STANDARD

DK. YEL. CHATTANOOGA

Nov. 25

Deep yellow sport from Chattanoosa. Same habit as original variety.

## WHITE POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Pin			vering late	Description	Price Classification
			6-WEEK	VARIETIES	s	
Sept. Morn (G)			Oct.	1	Int. Single	6.1
White Wonder	July	5	Oct.	-	Int. Pompon	S-1
Chris. Columbus (G)			Oct.	-	Int. Decorative	5-2 5-1
			7-WEEK	VARIETIES	S	
Avalanche (G)			Oct.	5	Snow White Decorative	S-2
White Cloud (G)			Oct.	5	Large Decorative	S-1
Horizon			Oct.	5	Pure White; Int. Pompon	P-3
Marshmallow	July	5	Oct.	5	Int. Single	P-1
Maestro (G)			Oct.	10	Int. Pompon	S-1
Renown (G)			Oct.	10	Small Single	S-1
Classic			Oct.	10	Small Semi-Formal Pompon	5-1
Silverplate			Oct.	12	Int. Decorative	S-1
			8-WEEK	VARIETIES	;	
Calif. White Daisy(Kimoto's White)			Oct.	15	Int. Single	S-1
Irene			Oct.	15	Small Pompon	
Norona	July	12	Oct.		Small Pompon	S-2
Pristine		-	Oct.	20	Pure White; Int. Pompon	P-3
Minong			Oct.		Small Pompon	5-1
Silvertone			Oct.	24	Int. Single	S-3 P-1
			9-WEEK	VARIETIES		
Popcorn			Oct.	25	Int. Pompon	
White Popcorn			Oct.			5-2
Keepsake			Oct.		Cream White Sport of Popcorn	P-3
Pinocchio			Oct.		Cream White; Int. Pompon	P-3
Samuela.			Oct.	25	Small Pompon	<b>S-3</b>
Cottonton			Oct.		Int. Pompon	S-1
Shooting Star	- July	19		25	Small Pompon	S-2
Arcadia			Oct.		Int. Single	P-3
Silver Cloud			Nov.	1	Int. Pompon	S-2
Halo			Nov.	j	Int. Single	P-1
Sea Gull			Nov.	i	Ivory White; Int. Single	S-1
White Doty			Nov.	i	lvory White; Int. Pompon Large Pompon	S-3 S-2
			10-WEEK	VARIETIES		
reedomWhitetop			Nov.	5	Int. Single	P-1
Madonna			Nov.	5	Int. Decorative	P-1
Colowa			Nov.	5	Int. Pompon	P-3
ncore			Nov.	5	Int. Single	S-1
White Anemone			Nov.	5	Pure White; Int. Pompon	S-2
		-7	Nov.	5	Large Anemone	S-1
Rev. Bushnell	July 2	9,,	Nov.	5	Large Single	S-2
doonglow			Nov.	8	Int. Formal Pompon	S-1
acesetter			Nov.	8	Int. Pompon	S-1
llini Igloo			Nov.		Int. Single	P-1
3100			Nov.	10	Int. Pompon	P-2
hasta						
hastaynamo			Nov.	10	int. Anemone	S-3

<sup>\*</sup> Responds to Disbudding.

<sup>(</sup>G) Recommended for Garden Culture.

## Gloeckner The EEEEE Manual Warnal

### WHITE POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Last Pinch	Flowering Date	Description	Price Classificatio
	10-\	WEEK VARIETIES-	-Cont'd	
		N 10	Int. Dames	
Vesper		Nov. 10 Nov. 10	Int. Pompon	5-2 S-1
Nagona		NOV. 10	Int. Single	3-1
(Calif. White Mensa)	July 26	Nov. 10	Pure White; Int. Anemone	S-3
Illini Snowdrift		Nov. 12	Novelty — Int. Decorative	S-1
Matchless		Nov. 12	Int. Pompon	5-2
		11-WEEK VARIET	IES	
Carlmina		Nov. 15	Ivory White — L. Single	P-3
SculptureWhite Norma		Nov. 15	Sport of Norma	S-1
Eskimo.		Nov. 15	Int. Single	P-3
Lakme		Nov. 15	Green Eye; Small Pompon	S-1
Snowflurry		Nov. 15	Small Pompon	S-1
Seafoam		Nov. 20	Int. Pompon	S-2
L. I. Beauty		Nov. 20	Yellow Cushion; L. Anemone	S-3
Highbrow	Aug. 2	Nov. 20	Ivory White; Int. Dec.	S-1
Nevada		Nov. 20	Green Cushion; Int. Anemone	S-2
Priscilla		Nov. 20	Int. Pompon	S-3
Illini Bountiful		Nov. 23	Int. Decorative	S-1
Crystal Beauty		Nov. 23	Int. Pompon	S-1
Paramount		Nov. 23	Int. Pompon	5-1
Belray		Nov. 24	Large Pompon	S-1
		12-WEEK VARIET	IES	
White Lady		Nov. 25	Sport of Beautiful Lady	P-2
White Valencia		Nov. 28	Sport of Valencia	S-1
Cordova	Aug. 9	Nov. 30	Cream White; Int. Dec.	5-2
Fortune	· ·	Dec. 1	Int. Formal Pompon	<b>\$-1</b>
Monarch		Dec. 1	Ivory White; L. Decorative	P-3
		13-WEEK VARIET	TIES	
Cameo		Dec. 5	Ivory White; Int. Dec.	S-3
Acclaim		Dec. 5	Large Formal Pompon	P-3
Swan		Dec. 5	Large Anemone	S-1
Spangles		Dec. 5	Int. Pompon	S-1
Cotillion		Dec. 5	Int. Semi-Formal Pompon	P-3
Snowdrop	Aug. 16	Dec. 8	Small Pompon	P-3
Carrara		Dec. 8	Int. Decorative	P-2
Illini Starlet		Dec. 10	Int. Anemone	P-1
Imp. White Supreme		Dec. 10	Large Anemone	S-1
Snow Queen		Dec. 10	Int. Formal Pompon	P-3
Yukon		Dec. 10	Int. Single	S-3
		14-WEEK VARIE	TIES	
Trenton		Dec. 15	Int. Pompon	P-1
Snowcrest		Dec. 15	Green Eye; Small Pompon	S-2
Silversmith		Dec. 15	Int. Decorative	S-2
Snowcap	Aug. 23	Dec. 15	Large Formal Pompon	S-2
Garza		Dec. 15	Int. Anemone	S-2
Satellite		Dec. 15	Ivory White; Int. Formal Pon	
Heirloom		Dec. 20	Int. Decorative	S-1

<sup>\*</sup> Responds to Disbudding.

<sup>(</sup>G) Recommended for Garden Culture.

## WHITE POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety Pinch	Flowering Date			Description	Price Classificatio
Revelation	Dec.	25 5	Int.	Decorative Pompon Pompon Decorative	S-3 S-3 P-1 P-1

## YELLOW POMPONS, DECORATIVES, SINGLES AND ANEMONES

		•		
		6-WEEK VARIETIES		
Yel. Chris. Columbus (G).		Oct. 1	Sport of Chris. Columbus	
Moonlight (G)	5	Oct. 1	Int. Decorative	S-1
Honeycomb (G)		Oct. 1	Small Pompon	P-2
			Small rompon	S-2
		7-WEEK VARIETIES		
Polaris		Oct. 5	Int. Single	S-1
Chas. Nye		Oct. 5	Int. Decorative	S-2
Garland (G)		Oct. 5	Int. Single	P-3
Yellow Spoon (G)		Oct. 5	Int. Spoon	S-1
Lee PowellJuly	5	Oct. 10	Large Decorative	P-2
	3	Oct. 10	Small Single	S-1
Treasure		Oct. 10	Small Pompon	3-1 P-3
Bright Forecast		Oct. 10	Small Formal Pompon	S-1
Lemonade		Oct. 12	Ivory Yellow Int. Dec.	3-1 S-1
Sweepstake		Oct. 12	Small Pompon	5-1 S-1
				<i>3</i> -1
		8-WEEK VARIETIES		
Arlora		Oct. 15	Large Pompon	P-1
CreampuffJuly	12	Oct. 20	Int. Single	P-1
Moondrift		Oct. 20	Int. Ivory Yel. Single	P-2
		9-WEEK VARIETIES	,	1-2
Ordalia				
Starlight		Oct. 25	Large Decorative	P-1
*Golden Herald		Oct. 25	Large Single	P-1
Gold Coast		Oct. 25	Golden Yellow; L. Dec.	S-3
Yellow Dot		Oct. 25	Int. Pompon	S-3
Cream Dot		Oct. 25	Int. Pompon	S-3
Aziec		Oct. 25	Int. Pompon	S-3
Sunup		Oct. 28	Int. Single	P-1
Yellow Arcadia		Oct. 28	Small Pompon	P-3
Sauferne		Oct. 28	Sport of Arcadia	S-2
Gondola		Oct. 30	Int. Single	P-1
GondolaJuly 1	9	Oct. 30	Int. Single	P-1
Mary L. Hall		Nov. 1	Deep Yellow; Int. Pompon	S-3
Yellow Halo	Ş.		Sport of Halo	P-2
Schn. Yel. Daisy		Nov. 1	Int. Single	S-1
*Yellow Doty		Nov. 1	Buff Yellow; Large Pompon	S-2
Starbright		Nov. 1	Deep Yellow; L. Single	S-1
Yellow Daisy		Nov. 1	Int. Single	S-2
Yellow Sea GullYellow Cassandra		Nov. 1	Light Yel. Sport of Sea Gull	S-3
Summer Cassangra		Nov. 1	Sport of Cassandra	S-1
Sunray		Nov. 3	Int. Single; S. Anemone Center	S-3
Honeymoon		Nov. 4	Large Single	7-1
				1-1

<sup>\*</sup> Responds to Disbudding.



### YELLOW POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Last Pinch	Flowering Date	Description	Price Classification
		10-WEEK VARIETS	ES	
Barcarole	1	Nov. 5	Int. Pompon	S-2
Brigadoon		Nov. 5	Int. Single	P-3
Crescendo	1	Nov. 5	Large Pompon	S-1
Constellation		Nov. 5	Int. Decorative	5-3
Pixie	July 26	Nov. 5	Small Pompon	5-2
	July 20	Nov. 5	Small Pompon	S-3
Golden Mensa		Nov. 5	Sport of White Mensa	S-2
Yellow Shasta		Nov. 10	Sport of Shasta	S-3
Mason's Yellow		Nov. 10	Large Single	\$-1
Yellow Nagona(Calif. Yellow Mensa)	'	Nov. 10	Int. Single	S-1
		11-WEEK VARIETI	ES	
Princeton		Nov. 15	Int. Decorative	S-2
Thorobred		Nov. 15	Large Single	P-3
Golden Chord		Nov. 15	Golden Yellow; Int. Pompon	S-2
Forty-Niner		Nov. 15	Int. Formal Pompon	S-2
Yellow Fellow		Nov. 15	Int. Decorative	S-2
Susanne Miller		Nov. 15	Large Anemone	S-1
Tacoma		Nov. 15	Large Pompon	P-2
Illini Brave		Nov. 16	Small Pompon	S-1
Fellow L. I. Beauty	Aug. 2	Nov. 20	Sport of L. I. Beauty	S-1
Yellow Highbrow		Nov. 20	Sport of Highbrow	P-2
Lollipop		Nov. 20	Int. Pompon	S-1
Pippin		Nov. 20	Int. Pompon	P-3
Klondike		Nov. 20	Orange Yel.; Int. Pompon	S-1
Bojangles		Nov. 20	Int. Single	S-1
Yellow Nevada		Nov. 20	Sport of Nevada	S-2
Illini Sunspot		Nov. 20	Large Pompon	P-2
Yellow Paramount	•	Nov. 23	Sport of Paramount	P-1
		12-WEEK VARIET	ES	
Goldenrod		Nov. 25	Int. Pompon	P-3
Illini Gold		Nov. 25	Deep Golden Yel. Int. Pompo	n 5-2 S-2
Goldsmith		Nov. 25	Large Decorative	3-2 P-3
Highlander		Nov. 25	Int. Formal Decorative	S-3
Sunnyside		Nov. 25	Int. Pompon	S-1
Champagne	Aug. 9	Nov. 25 Nov. 28	Int. Single Sport of Valencia	S-2
Fellow Valencia Fellow Cordova		Nov. 30	Sport of Cordova	5-2
Yellow Fortune		Dec. 1	Deep Yellow Sport of Fortune	P-1
Omega		Dec. 1	Int. Pompon	5-3
Nosegay		Dec. 1	Small Pompon	P-3
Yellow Galaxy		Dec. 1	Sport of Galaxy	P-2
		13-WEEK VARIETI	ES	
Golden Harvest		Dec. 5	Deep Gold; Small Pompon	S-1
Brandywine		Dec. 5	Orange Yellow; Int. Dec.	P-3
	Aug. 16	Dec. 5	Golden Yellow; L. Dec.	P-3
Jack-Pot	AUG. 10	M 0 41 W		
Jack-Pot Symmetry		Dec. 5	Int. Pompon	P-3 S-1

<sup>\*</sup> Responds to Disbudding.

<sup>(</sup>G) Recommended for Garden Culture.

### YELLOW POMPONS, DECORATIVES, SINGLES AND ANEMONES

La Variety Pin		Flowering Date	Description	Price Classification
	13	-WEEK VARIETIES-C	ont'd	
Yellow Cameo		Dec. 5	Sport of Cameo	S-3
Yellow Spangles		Dec. 5	Sport of Spangles	P-2
Cinderella		Dec. 5	Int. Single	S-1
Goldfone Aug.	16	Dec. 5	Int. Single	S-1
*Imp. Yel. Supreme		Dec. 10	Large Anemone	S-1
Challenge		Dec. 10	Int. Single	S-1
Corsair		Dec. 10	Large Semi-Formal Pompon	P-3
		14-WEEK VARIETIES		
Yellow Snowcap		Dec. 15	Deep Lemon; Sport of Snowcar	P-1
Yellow Riviera		Dec. 15	Golden Yel.; Sport of Riviera	S-1
Cream Snowcrest		Dec. 15	Sport of Snowcrest	P-2
Yellow Snowcrest		Dec. 15	Sport of Snowcrest	P-3
Yellow Garza		Dec. 15	Sport of Garza	S-2
Sequin		Dec. 15	Small Pompon	S-1
Shamrock		Dec. 15	Large Decorative	S-1
	23	Dec. 15	Golden Yel.; Int. Decorative	S-2
Sunkist		Dec. 20	Int. Single	S-1
Vibrant		Dec. 20	Int. Decorative	S-3
Revelry		Dec. 20	Int. Decorative	P-3
Gold Seal		Dec. 20	Int. Single	P-2
Sunrise		Dec. 20	Int. Pompon	P-3
Golden Anniversary		Dec. 25	Small Pompon	\$-1
		15-WEEK VARIETIES		
Siren		Dec. 25	Int. Decorative	S-1
Yuleflame		Dec. 25	Large Decorative	S-1
Yellow Snow	30	Dec. 25	Sport of Snow	S-3
Ill. Yel. Snowbound		Jan. 5	Sport of III. Snowbound	3-3 P-2

### BRONZE AND RED POMPONS, DECORATIVES, SINGLES AND ANEMONES

		6-WEEK VARIETIES		
W. P. Snyder (G)  Marionette  Mogul  Bonfire	5	Oct. 1 Oct. 1 Oct. 1 Oct. 1	Coral Bronze; Int. Decorative Rust Red; Small Pompon Raspberry Bronze; Small Dec. Red Pompon	S-1 S-1 P-2 S-1
		7-WEEK VARIETIES		
Avalon (G)  Mona (G)  Huntsman  Firecracker  Buckeye  Panorama  Red Velvet (G)  Bamboo  Blueblood  Calico  Caravan (G)	5	Oct. 5 Oct. 5 Oct. 5 Oct. 5 Oct. 8 Oct. 8 Oct. 10 Oct. 10 Oct. 10 Oct. 10 Oct. 10 Oct. 10	Light Bronze; Small Pompon Small Pompon Reddish Bronze; Large Dec. Mahogany Bronze; Int. Dec. Int. Salmon Bronze Pompon Orange Bronze; Small Pompon Velvety Crimson; Int. Dec. Buff Bronze; Small Single Deep Amaranth; Int. Dec. Coral Bronze; Small Single Salmon Bronze; Int. Dec.	P-2 S-1 S-1 P-3 P-1 P-2 S-2 S-1 P-3 S-1

<sup>(</sup>G) Recommended for Garden Culture.

<sup>\*</sup> Responds to Disbudding.

## Gloeckner Chrysanthemin Manual Chrysanthemin Manual

### BRONZE AND RED POMPONS, DECORATIVES, SINGLES AND ANEMONES

	ast inch	Flowering Date	Description C	Price lassification
	7-	WEEK VARIETIES-Co	nt'd	
Carmine Queen		Oct. 10	Carmine Red; Small Pompon	S-1
Carnival		Oct. 10	Burnt-Orange; Small Pompon	S-1
ireside		Oct. 10	Burnt-Orange; Salmon; Int. Dec.	S-1
Vokomis (G)		Oct. 12	Bronze; Int. Dec.	S-1
locturne		Oct. 12	Crimson; Small Pompon	S-1
IvtodaJul	y 5	Oct. 12	Apricot Buff; Int. Single	P-2
armelita		Oct. 12	Orange Apricot; Int. Dec.	S-1
Vitchery		Oct. 12	Golden Bronze; Int. Dec.	S-1
Ars. Du Pont (G)		Oct. 12	Coral Buff; Large Decorative	S-1
Admiral (G)		Oct. 12	Crimson; Int. Decorative	P-3
Moonmaid		Oct. 14	Salmon Bronze; Int. Pompon	P-1
		8-WEEK VARIETIES		
Robinhue		Oct. 15	Red; Int. Decorative	S-1
ted Glow		Oct. 15	Crimson Red; Int. Decorative	S-1
ocktail		Oct. 15	Salmon Orange; Int. Pompon	P-3
Rajah		Oct. 15	Scarlet Red; Int. Single	P-3
DetroiterJul	. 12	Oct. 15	Reddish Bronze; Small Pompon	S-1
CALLEGS DAGWCAA	y 12	Oct. 15	Apricot Gold; Small Pompon	S-1
Calisman		Oct. 20	Talisman Bronze; Int. Single	P-1
Paradise		Oct. 20	Coral Red; Int. Single	P-1
Pallette		Oct. 20	Dark Salmon; Int. Single	P-1
Br. Mary McArthur		Oct. 23	Sport of Mary McArthur	5-1
		9-WEEK VARIETIES		
Gaiefy		Oct. 25	Coral Bronze; Int. Single	P-1
'irebird		Oct. 25	Reddish Bronze; Int. Dec.	5-2
Bronze Doi		Oct. 25	Sport of Pink Dot	S-3
Buckskin		Oct. 25	Tawny Bronze; Small Single	S-1 P-1
filarity		Nov. 1	Golden Bronze; Int. Single	S-2
eneca		Nov. 1	Orange Red; Int. Dec.	3-2 S-1
irefly		Nov. 1	Orange Red; Int. Pompon	-
Bronze Daisy	. 10	Nov. 1	Light Bronze Sport of Yel. Daisy	S-1
mp. Bronze Daisy Jul (Katoka Red)	y 19	Nov. 1	Sport of Br. Daisy	
Buccaneer		Nov. 1	Orange Apricot; Int. Single	P-3
Red Seneca		Nov. 1	Red Sport of Seneca	S-1
Bronze Buckingham		Nov. 1	Sport of Pk. Calif. Daisy	S-1
Vavaho		Nov. 1	Red; Int. Pompon	S-2 S-2
Red Daisy mp. Red Daisy (Adachi Red)		Nov. 1 Nov. 1	Red; Int. Single Sport of Red Daisy	S-1
		10-WEEK VARIETIES		
Comanche		Nov. 2	Orange Bronze; Int. Pompon	S-1
lame Glow		Nov. 5	Golden Orange; Int. Single	P-1
Drange Beauregard		Nov. 5	Golden Br. Sport of Beauregard	
Beauregard		Nov. 5	Reddish Orange; Int. Pompon	S-1
	y 26	Nov. 5	Golden Bronze; Int. Pompon	S-1
		Nov. 5	Orange Bronze; Int. Pompon	S-2
			B. J.B.L. Borner, Int. Box	6.0
Cassandra Red Rust Rubicon		Nov. 5 Nov. 5	Reddish Bronze; Int. Dec. Bronze Red; Int. Dec.	5-2 5-2

<sup>(</sup>G) Recommended for Garden Culture.

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## BRONZE AND RED POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Last Pinch	Flowe Da		Description	Price Classification
	10	O-WEEK VARI	ETIESC	Cent'd	
Biffersweet		Nov.	5	Bittersweet Red; Int. Single	S-2
Samovar		Nov.	10	Reddish Bronze; Int. Pompon	S-1
Sylvanna		Nov.	10	Reddish Orange; Int. Single	S-2
Chanticleer		Nov.	10	Reddish Bronze; L. Pompon	S-1
Manson's Bronze		Nov.	10	Burnt Orange; Large Single	S-1
Mason's Red		Nov.	10	Scarlet; L. Single	S-1
Chevron		Nov.	10	Red Orange; Int. Dec.	S-1
The Tifan		Nov.	10	Red; Large Anemone	S-2
Bronze Thyra		Nov.	10	Sport of Thyra	S-1
Illini Burma		Nov.	10	Light Bronze; L. Pompon	P-3
Europa	July 26	Nov.	10	Cardinal Red; L. Single	S-1
	JUIY 20	Nov.	10	Coppery Bronze; L. Dec.	S-1
Bronze Linda Lou		Nov.	10	Sport of Linda Lou	S-1
Bronze Tuxedo		Nov.	10	L. Anemone; Sport of Tuxedo	S-1
Gold Braid		Nov.	12	Yel. Bronze-Red Center; Int. Por	n. P-3
Illini Rye		Nov.	12	Straw Color; Int. Pompon	n. P-3
Bronze Masterpiece		Nov.	12	Sport of Masterpiece	S-3
Dk. Br. Masterpiece		Nov.	12	Sport of Br. Masterpiece	5-3 S-2
Paragon		Nov.	12	Red; L. Pompon	
Illini Tangier		Nov.		Reddish Bronze; L. Decorative	S-1
Red King		Nov.		Large Red Single	P-2
Cadet		Nov.		Red; Int. Anemone	P-1 P-1
		11-WEEK V	ARIETIES		• •
Mrs. Dewey		Nov.	1.5	Danie Burn I. dt. I.	
Shalimar		Nov.		Deep Bronze; L. Single	S-1
Red Princeton		Nov.		Orange Bronze; Int. Anemone	P-3
Illini Honey		Nov.		Brazil Red; Sport of Princeton	<b>S-2</b>
Illini Redhead		Nov.		Honey Amber, Small Pompon	S-1
Illini Warrior		Nov.		Deep Red; Small Pompon	S-1
Legal Tender		Nov.		Bronzy Orange; Small Pompon	S-1
Rusticon	Aug. 2	Nov.		Bronze & Gold; Int. Dec.	S-3
Thelma		Nov.		Rust Red; Int. Pompon	S-2
Bourbon		Nov.		Orange Scarlet; Int. Pompon	P-3
Carousel		Nov.		Rust Bronze; Int. Single	S-1
Festival		Nov.		Coral Bronze; Int. Single	S-1
Bronze Minuet		Nov.		Apricot Red; Small Single	S-1
Red Rolinda				Sport of Minuet	<b>S-2</b>
€		Nov. 2	23	Red; Int. Anemone	<b>S-3</b>
Ilini Redwood		12-WEEK V			
Bronze Goldsmith		Nov. 2		Red; Int. Pompon	P-1
Wanakah		Nov. 2		Mars Orange; Int. Dec.	S-2
alcon		Nov. 2		Sport of Hasegawa Pink	P-2
olanda		Nov. 2		Reddish Bronze; Int. Pompon	S-1
ndian Head	uq. 9	Nov. 2		Dk. Orange Bronze; Int. Anemon	5-1 9 S-1
pricot Valencia	- J. /	Nov. 2		Reddish Apricot; Int. Single	S-1
rimson Valencia		Nov. 2		Sport of Valencia	5-2
mberina		Nov. 2		Sport of Valencia	5-1
lalaxy		Dec.	1	Orange Bronze; Int. Dec.	P-3
<u> </u>		Dec.	1	Orange Scarlet; Int. Single	S-1
		13-WEEK VA	RIETIES		
Dazzler		Dec.	5	Coppery Bronze; Partial Anemone	
Bronze Enchantress	ug. 16		5	Sport of Enchantress	
Debonair			5	Crimson Red; L. Pompon	S-2
					S-2

<sup>\*</sup> Responds to Disbudding.



### BRONZE AND RED POMPONS, DECORATIVES, SINGLES AND ANEMONES

	Last Flowering Pinch Date			Description	Price Classification
	13-V	VEEK VAR	ETIESC	ont'd	
Mahogany Viking		Dec.	5	Mahogany Bronze; Int. Single	S-1
*Imp. Bronze Supreme		Dec.	10	Large Anemone	S-1
*Red Supreme		Dec.	10	Sport of Dk. Pk. Supreme	S-1
Harlequin		Dec.	10	Crimson Red; Int. Decorative	P-3
Holiday Au	g. 16	Dec.	10	Crimson Red; Int. Single	S-1
Pageantry	_	Dec.	10	Red; Int. Pompon	S-1
Christmas Star		Dec.	12	Scarlet Red; Int. Single	5-2
*Bronze Minstrel		Dec.	13	Coral Sport of Minstrel	S-1
*Dark Bronze Minstrel!		Dec.	13	Reddish Bronze Sport of Minstr	el P-2
		14-WEEK	VARIETIES	3	
Bronze Riviera		Dec.	15	Sport of Riviera	S-1
Claret		Dec.	15	Brilliant Red; Int. Single	P-3
Topaz		Dec.	15	Orange Bronze; Int. Single	P-3
-	g. 23	Dec.	15	Crimson Scarlet; Int. Dec.	S-1
Sarong		Dec.	15	Crimson; Int. Single	5-2
Merrymaker		Dec.	20	Scarlet Red; Int. Single	S-1
Poinsettia		Dec.	20	Scarlet Red; L. Single	P-3

### PINK POMPONS, DECORATIVES, SINGLES AND ANEMONES

	6-WEEK V	ARIETIES		
Early Wonder	Oct.	1	Lavender, Int. Pompon	<b>S-2</b>
Spellbound (G)	Oct.	1	Int. Decorative	S-2
•				
	7-WEEK V	ARIETIES		
Petrisian Mauve (G)	Oct.	5	Int. Pompon	P-0
Petrisian Pink (G)	Oct.	5	Int. Pompon	P-0
Petrisian Rose (G)	Oct.	5	Int. Pompon	P-0
Courtier (G)	Oct.	10	Lavender Pink Decorative	P-3
Dream Girl	Oct.	10	Int. Pompon	S-1
Ponca (G)	Oct.	10	Dk. Lavender, Small Decorative	S-1
Argonne	Oct.	10	Amaranthe Pompon	S-1
Lassie	Oct.	10	Dk. Pk.; Int. Decorative	P-3
Serenade	Oct.	10	Magenta Pink; Int. Single	S-1
Orchid Spoon (G)	Oct.	10	Int. Spoon	S-1
Joybringer (G) July 5		10	Salmon Rose; Int. Pompon	S-1
Brigadier	Oct.	10	Salmon Rose; Int. Decorative	P-2
Sweetheart	Oct.	10	Light Lavender; Int. Single	S-1
Allegro (G)	Oct.	12	Small Decorative	S-2
Masquerade (G)	Oct.	12	Small Pompon	S-1
Ronnie (G)	Oct.	12	Dk. Lavender, Small Pompon	S-1
Salute	Oct.	12	Deep Pink; Small Single	S-1
Adagio	Oct.	12	Coppery Rose Pompon	S-1
Lavender Lady (G)	Oct.	12	Light Lavender; Large Decorative	S-1
Sonnet (G)	Oct.	14	Salmon Pink; Int. Pompon	P-1
Betty	Oct.	14	Lt. Salmon Pink; Int. Pompon	S-1

<sup>\*</sup> Responds to Disbudding.

<sup>(</sup>G) Recommended for Garden Culture.



### PINK POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Last Pinch	Flowering Date	Description	Price Classification
		8-WEEK VARIETIE	is s	
Fairyland		Oct. 15	Pink; Int. Decorative	P-1
Mayfair		Oct. 15	Pink; Int. Single	P-1
Jester		Oct. 15	Dark Orchid Pink; Int. Single	P-1
Citation		Oct. 15	Pink; Int. Pompon	P-1
Enterprise		Oct. 15	Amaranth, Int. Pompon	P-2
Eliz. Hood	ly 12	Oct. 15	Lavender; Large Pompon	P-2
Jewell		Oct. 15	Lavender; Small Pompon	S-2
Carolyn Yosick		Oct. 20	Lavender; Small Decorative	S-3
Pink Sprite		Oct. 23	Small Pompon	S-1
Mary McArthur		Oct. 23	Small Pompon	S-1
Prelude		Oct. 24	Coral Pink; Int. Single	P-1
		9-WEEK VARIETIE	s	
Pinkette		Oct. 25	Pink; Int. Pompon	P-1
Vogue		Oct. 25	Pink; Large Single	P-1
Edith Roberts		Oct. 25	Light Orchid Pink; Small Pompo	
Reward		Oct. 25	Int. Single	S-1
Pink Dot		Oct. 25	Int. Pompon	5-3
Jessie		Oct. 25	Lavender; Int. Pompon	S-3
Betty Rose		Oct. 25	Lavender; L. Anemone	S-1
October Pink		Oct. 25	Int. Single	<b>S-2</b>
BluechipJu	ly 19	Nov. 1	Pink; Int. Decorative	P-1
Pk. Calif. Daisy (W. H. Buckingham)		Nov. 1	Int. Single	S-1
Rainbow		Nov. 1	Coral Pink; Int. Single	D 0
Ballerina		Nov. 1	Int. Single	P-2 S-1
Lillian Doty		Nov. 1	Rose Pink; L. Pompon	S-1
Arbutus		Nov. 1	Shrimp Pink; Int. Pompon	3-2 P-2
Lotus		Nov. 3	Pink; Int. Pompon	P-1
l'empo		Nov. 3	Deep Pink; Int. Decorative	P-1
		10-WEEK VARIETIE	:5	
Dreamboat Dark Bulkeley		Nov. 5	Lavender Pink; Int. Pompon	5-2
Portrait		Nov. 8	Int. Formal Pompon	S-1
Pennant		Nov. 8	Pink; Large Pompon	P-1
Cover Girl		Nov. 10	Pink; Int. Decorative	P-1
Nobility		Nov. 10 Nov. 10	Light Pink; Int. Anemone	P-1
Pandora			Light Pink; Int. Single	P-1
Thyra		Nov. 10	Luminous Pink; L. Dec.	P-3
Soprano	v 26	Nov. 10 Nov. 10		S-3
Linda Lou	, 20	Nov. 10	Large Single	S-1
Dark Linda Lou	3	Nov. 10	Yellow Cushion; Int. Anemone	S-3
Tuxedo		Nov. 10	Sport of Linda Lou	S-3
Masterpiece		Nov. 12	Large Anemone Int. Pompon	S-1
Rose Masterpiece		Nov. 12	Rose Pk. Sport of Masterpiece	S-3
Salmon Masterpiece		Nov. 12	Salmon Pk. Sport of Masterpiece	S-2
Memorial		Nov. 12	int. Anemone	
Taffeta		Nov. 12	Int. Decorative	P-3
			Decording	S-1

<sup>\*</sup> Responds to Disbudding.

<sup>(</sup>G) Recommended for Garden Culture.

## Gloeckner Chrysanthemium Manual W

### PINK POMPONS, DECORATIVES, SINGLES AND ANEMONES

Variety	Last Pinch	Flowering Date	Description C	Price Classificatio
		11-WEEK VARIETIES		
Carole		Nov. 15	Lt. Pk., Salm. Cush.; Int. Anemo	ne P-1
Dark Norma		Nov. 15	Deep Lavender; L. Anemone	S-1
Orchid Beauty		Nov. 15	Golden Cushion; Int. Anemone	S-2
Brocade		Nov. 15	Shell Pink; Int. Single	S-3
Polka		Nov. 20	Pink; Int. Anemone	P-1
Nugano		Nov. 20	Pink; Int. Pompon	P-1
Grand Slam		Nov. 20	Silvery Shell Pk.; L. Single	P-3
Almega		Nov. 20	Lavender Pink; Large Pompon	P-2
Vivacious Lady	Aug. 2	Nov. 20	Spoon Type Novelty	P-3
Evening Star		Nov. 20	Dk. Lavender; Int. Anemone	P-3
Pink L. I. Beauty		Nov. 20	Lt. Pk. Sport of L. I. Beauty	S-1
Pinky		Nov. 20	Int. Decorative	S-1
Dark L. I. Beauty		Nov. 20	Imp. Pink L. I. Beauty	P-2
Dark Pink Majorette		Nov. 20	Dark Pink Sport of Majorette	P-1
Majorette		Nov. 20	Int. Anemone	S-1
Minuef		Nov. 23	Int. Pompon	S-2
Illini Formal		Nov. 23	Rose Pink; Int. Pompon	P-1
		12-WEEK VARIETIES		
Pink Cloud		Nov. 25	Light Pink; Int. Decorative	P-1
Princess		Nov. 25	Small Pompon	P-3
Hasegawa Pink		Nov. 25	Lavender; Int. Single	S-1
Beautiful Lady		Nov. 25	Lavender; L. Anemone	S-3
Valencia.		Nov. 28	Orchid Pk.; Large Single	S-2
Dark Valencia	Aug. 9	Nov. 28	Sport of Valencia	S-2
Dubonnet Valencia		Nov. 28	Deep Orchid Sport of Valencia	P-2
Orchid Valencia		Nov. 28	Orchid Sport of Valencia	P-3
Salmon Valencia		Nov. 28	Salmon Pink Sport of Valencia	P-3
Heritage		Dec. 1	Dark Pink; L. Formal Pompon	P-3
		13-WEEK VARIETIES		
Enchantress		Dec. 5	Large Anemone	S-2
Dark Enchantress		Dec. 5	Deep Pk. Sport of Enchantress	S-1
Argyle		Dec. 10	Pink; Small Pompon	P-1
Debutante	Aug. 16	Dec. 10	Large Single	S-1
Imp. Dark Supreme		Dec. 10	Sport of Dk. Pk. Supreme	S-1
Minstrel		Dec. 13	Int. Formal Pompon	S-1
Lt. Pk. Minstrel		Dec. 13	Sport of Minstrel	P-2
		14-WEEK VARIETIES		
Riviera		Dec. 15	Luminous Pink; Int. Dec.	S-3 P-2
Serrated Riviera		Dec. 15	Sport of Riviera	
Coronet		Dec. 15	Dark Pink; Int. Single	S-1
Rosalind	Aug. 23	Dec. 20	Int. Single	S-3
Defiance		Dec. 20	Int. Decorative	S-1
Medallion		Dec. 20	Int. Pompon	S-1
		Dec. 20	Sport of Medallion	F-2

<sup>\*</sup> Responds to Disbudding.

### WHITE STANDARDS

Variety	Last Pinc		Select Bud	Flowering Date	Description C	Price lassification
611 a			8-WEEK VAR	IETIES		
Silver SheenWhite Chief	L July	12	Aug. 30	Oct. 20	Int. Incurved	S-3
white Chief	F 33.7		Aug. 30	Oct. 20	Int. Incurved	5-1
Therefore and the second			9-WEEK VAR	IETIES		
AmbassadorAlbaíross	July '	19	Aug. 30	Oct. 25	Cream White; Int. Semi-Incurve	ed S-2
AIDAH OSS	1 1		Sept. 5	Nov. 1	Pure White; Int. Incurved	5-2
Beisy Ross			10-WEEK VAR			
Giant Betsy Ross			Sept. 5 Sept. 5	Nov. 5 Nov. 5	Ivory White; L. Incurved	5-3
Indianapolis White			Sept. 5	Nov. 5	Sport of Betsy Ross Int. Incurved	S-2
Jean Elizabeth	July :	26	Sept. 8	Nov. 10	L. Semi-Incurved	5-3 5-2
Crystal QueenWhite Pockett			Sept. 8	Nov. 10	Imp. Jean Elixabeth	P-2
Monument			Sept. 8	Nov. 10	Large incurved	S-1
	•		Sept. 8	Nov. 10	Ivory White; Int. Incurved	S-2
Sterling			11-WEEK VAR Sept. 10	Nov. 15	Laure Inc. 1	
Marketeer	1		Sept. 15	Nov. 18	Large Incurved Int. Semi-Incurved	S-1 S-3
Mefo	Aug.	2	Sept. 20	Nov. 20	Ivory White; L. Incurved	5-3
White FrickIndiana Market			Sept. 20	Nov. 20	int. Incurved	5-2
muidid Warker	1		Sept. 20	Nov. 20	Int. Incurved	5-1
Chattanooga			12-WEEK VAR			
December Glory	L Aug.	9	Sept. 30 Oct. 1	Nov. 25 Dec. 1	Large Incurved	5-3
Margaret Moeller	Aug.	,		∞ Dec. 3	Ivory White; Int. Incurved Int. Incurved	\$-2 \$-2
			13-WEEK VAR		m. mcorved	5-3
December White			Oct. 5	Dec. 5	Int. Incurved	S-2
White Mistletoe Snowline	Aug 1	16	Oct. 5	Dec. 5	Int. Incurved	S-2
Snowline Smith's White	Aug. 1		Oct. 8	Dec. 10	Large Incurved	5-1
JAHRAN S WHILE	1		Oct. 8	Dec. 13	Int. Semi-Incurved	5-2
Y	ELL	0	W STA	NDAR	DS	
Gold Lode			8-WEEK VARI			
Celestra			Aug. 25 Aug. 25	Oct. 15 Oct. 15	Int. Reflexed Small Semi-Incurved	5-3
Mrs. Kidder	July 1	2	Aug. 30	Oct. 13	Int. Incurved	S-2 S-3
Bufferball			Aug. 30	Oct. 20	Int. Incurved	5-1
Blazing Gold	1		Aug. 30	Oct. 23	Golden Yellow; Int. Semi-Incurve	
Smith Superlative			9-WEEK VARI			
Vollage Name had a disc			Aug. 30	Oct. 25	Golden Yellow; Int. Semi-Incurve	
Yellow Bergen			Aug. 30 Aug. 30	Oct. 25 Oct. 25	Sport of Ambassador	5-2
		9	Aug. 30	Oct. 25	Sport of Hilda Bergen Golden Yellow; Int. Incurved	S-2 S-3
Golden Glory			Sept. 5	Nov. 1	Golden Yellow; Int. Incurved	5-2
Good News			Sept. 5	Nov. 1	int. incurved	5-2
mp. Ind. Yellow			10-WEEK VARI			
ndianapolis Yellow			Sept. 5	Nov. 5	Sport of Ind. Yellow	5-1
Tellow Queen			Sept. 5 Sept. 8	Nov. 5 Nov. 10	Int. Incurved Sport of Orchid Queen	5-3
lamboree	July 2	6	Sept. 8	Nov. 10	Golden Yellow; Int. Incurved	5-2 5-1
rellow Pockett			Sept. 8	Nov. 10	Large Incurved	5-1
Tellow Monument			Sept. 8	Nev. 10	Sport of Monument	S-2
loney bew			Sept. 8	Nov. 12	Int. Incurved	5-2
ellow Marketeer		1	11-WEEK VARI			
Bonnaffon Deluxe			Sept. 15 Sept. 20	Nov. 18 Nov. 20	Sport of Marketeer Small Incurved	P-2
riendly Rival			Sept. 20	Nov. 20	Int. Incurved	S-3 S-2
rellow Mefo	Aug.	2.	Sept. 20	Nov. 20	Sport of Mefo	S-3
ream Mefo	Aug.		Sept. 20	Nov. 20	Sport of Mefo	S-2
Purdueiarvester		1	Sept. 25	Nov. 20	Int. Incurved	5-1
Marie DePetris			Sept. 20 Sept. 25	Nov. 23 Nov. 23	Int. Incurved	5-3
		1	2-WEEK VARI		Golden Yellow; Int. Incurved	S-2
			Sept. 30	Nov. 25	Sport of Chattanooga	P-1
ok. Yel. Chattanooga						
Tellow Chattanooga			Sept. 30	Nov. 25	Sport of Chattanooga	5-3
Tellow Chattanooga	Au-		Sept. 30	Nov. 25	Int. Incurved	S-3
ellow Chattanooga olden Pearson ungold	► Aug. 9	9	Sept. 30 Sept. 30	Nov. 25 Nov. 25	Int. Incurved Int. Incurved	S-3 S-2
Tellow Chaffanooga	► Aug. 9	9	Sept. 30	Nov. 25 Nov. 25 Nov. 25	Int. Incurved Int. Incurved Golden-Yel. Semi Inc.	S-3 S-2 S-1
ellow Chattanooga olden Pearsonungold	Aug. 9	9	Sept. 30 Sept. 30 Sept. 30	Nov. 25 Nov. 25	Int. Incurved Int. Incurved	S-3 S-2
Tellow Chaffanooga	► Aug. S		Sept. 30 Sept. 30 Sept. 30 Oct. 1 Oct. 1 3-WEEK VARIE	Nov. 25 Nov. 25 Nov. 25 Dec. 3 Dec. 3	Int. Incurved Int. Incurved Golden-Yel. Semi Inc. Golden Yellow; L. Incurved	S-3 S-2 S-1 S-3
Tellow Chattanooga	► Aug. 9		Sept. 30 Sept. 30 Sept. 30 Oct. 1 Oct. 1 3-WEEK VARIE Oct. 5	Nov. 25 Nov. 25 Nov. 25 Dec. 3 Dec. 3	Int. Incurved Int. Incurved Golden-Yel. Semi Inc. Golden Yellow; L. Incurved Sport of Margaret Moeller Int. Incurved	S-3 S-2 S-1 S-3 S-1
Tellow Chattanooga		1	Sept. 30 Sept. 30 Sept. 30 Oct. 1 Oct. 1 3-WEEK VARIE Oct. 5 Oct. 5	Nov. 25 Nov. 25 Nov. 25 Dec. 3 Dec. 3	Int. Incurved Int. Incurved Golden-Yel. Semi Inc. Golden Yellow; L. Incurved Sport of Margaret Moeller Int. Incurved Int. Incurved	S-3 S-2 S-1 S-3 S-1 S-2 P-3
Tellow Chaftanooga	► Aug. 9	1	Sept. 30 Sept. 30 Sept. 30 Oct. 1 Oct. 1 3-WEEK VARIE Oct. 5	Nov. 25 Nov. 25 Nov. 25 Dec. 3 Dec. 3	Int. Incurved Int. Incurved Golden-Yel. Semi Inc. Golden Yellow; L. Incurved Sport of Margaret Moeller Int. Incurved	S-3 S-2 S-1 S-3 S-1

### BRONZE and RED STANDARDS

Variety	Last Pincl		Select Bud	Flowe Da	_	Description Clas	Price sification
			9-WEEK VARIE	TIES			
Hilda Bergen			Aug. 30	Oct.	25	Int. Incurved	S-2
Glitters			Sept. 1	Oct.	28	Reddish Orange; Int. Reflexed	5-2
Red Glitters	July	10	Sept. 1	Oct.	28	Sport of Glitters	S-2
lvanhoe	July	13	Sept. 5	Nov.	1	Reddish Bronze; Small Incurved	5-2
Apricot Queen			Sept. 5	Nov.	1	Orange Bronze; Int. Incurved	S-2
Detroit News			Sept. 5	Nov.	3	Reddish Bronze; Int. Incurved	5-2
			10-WEEK VARI	ETIES			
Indianapolis Bronze			Sept. 5	Nov.	5	Int. Incurved	S-3
Dark Ind. Bronze			Sept. 5	Nov.	5	Sport of Ind. Bronze	P-2
Anaconda			Sept. 7	Nov.	8	Coppery Red; Large Incurved	S-2
Oakdale	July	26	Sept. 8	Nov.	10	Buff Bronze; Int. Incurved	S-1
Mrs. Stahelin	July	20	Sept. 8	Nov.	10	Reddish Bronze; Int. Incurved	S-1
Bronze Orchid Queen			Sept. 8	Nov.	10	Sport of Orchid Queen	S-2
Mrs. Roy			Sept. 10	Nov.		Red; Int. Incurved	S-1
Garnet King			Sept. 10	Nov.	13	Deep Red; Int. Reflexed	5-2
			11-WEEK VAR	IETY			
Bronze Frick	Aug.	2	Sept. 20	Nov.	20	Sport of Helen Frick	5-2
			12-WEEK VARI	ETIES			
Gladys Pearson			Sept. 30	Nov.	25	Buff Bronze; Int. Incurved	5-3
Oak Leaf	Aug.	9	Sept. 30	Nov.	25	Deep Bronze; Int. Incurved	S-3
Muto's Crimson			Oct. 1	Dec.	1	Red; Int. Semi-Incurved	5-1
			13-WEEK VAR	IFTY			
Bronze Mistletoe	Aug.	16	Oct. 5	Dec.	5	Int, Incurved	S-2
r	IN	K	STAN	DA	RD	S	
			8-WEEK VARI				
Pink Chief	July	12	Aug. 25	Oct.	1.5	Lavender; Int. Incurved	S-3
Pink Chiel	July	12	•			advender, in incorred	
			9-WEEK VAR		1	Int. Incurved	S-1
Sugarplum	July	19	Sept. 5	Nov.		int, incurved	3-1
			10-WEEK VARI		_		
J. W. Prince			Sept. 5	Nov.	_	Lav.; Int. Incurved	S-2
Indianapolis Pink			Sept. 5	Nov.		Int. Incurved	S-3 S-2
	July	26	Sept. 8	Nov.		Orchid Pink; Semi-Incurved	5-2 5-1
Orchid Queen			Sept. 8	Nov.		Sport of Orchid Queen  Deep Pink Sport of Orch. Queen	
Orchid QueenLavender Queen	July						3-4
Orchid Queen Lavender Queen Dark Orchid Queen	July		Sept. 8	Nov.			
	July		Sept. 8	Nov.		Large Incurved	S-1
Orchid Queen	July		Sept. 8 11-WEEK VARI	Nov. ETIES	10	Large Incurved	S-1
Orchid Queen	July		Sept. 8 11-WEEK VARI Sept. 20	Nov. ETIES Nov.	10	Large Incurved  Rose Pink; Int. Incurved	S-1 S-2
Orchid Queen	Aug.	2	Sept. 8 11-WEEK VARI Sept. 20 Sept. 25	Nov. ETIES Nov. Nov.	10 20 23	Large Incurved  Rose Pink; Int. Incurved Deep Pink; Int. Reflexed	S-1 S-2 S-3
Orchid Queen	,	2	Sept. 8 11-WEEK VARI Sept. 20	Nov. ETIES Nov.	10 20 23	Large Incurved  Rose Pink; Int. Incurved	S-1 S-2
Orchid Queen	,	2	Sept. 8 11-WEEK VARI Sept. 20 Sept. 25	Nov. ETIES Nov. Nov. Nov.	10 20 23	Large Incurved  Rose Pink; Int. Incurved Deep Pink; Int. Reflexed	S-1 S-2 S-3

## Odd Flowered Spider Types

Variety	Last Pinch	Select Bud	Flowe	-	Description	Price Classificatio
		9-WEEK VA	RIETIES			
Moribana		Sept. 3	Oct.	25	Yellow	P-2
Dalwin		Sept. 3	Oct.	25	Light Bronze	P-2
Dueen's Lace		Sept. 5	Nov.		White	S-1
Kay Tashima		Sept. 5	Nov.		White	S-1
Yellow Lace	July 19	Sept. 5	Nov.		Yellow	S-1
	July 17	Sept. 5	Nov.		Imp. Yellow Lace	P-2
Gold Lace		Sept. 5	Nov.		Sport of Yel. Lace	P-2
		Sept. 5	Nov.		Deep Lavender	S-1
Mrs. Walker Mary Garden		Sept. 5	Nov.		Pink	S-1
Wat y Caracon			ARIETIES			
White Rayonnante		Sept. 5	Nov.	5	White	S-2
Yellow Rayonnante		Sept. 5	Nov.	5	Yellow	S-1
Waikiki		Sept. 5	Nov.	5	Apricot Bronze	S-1
Gena Harwood		Sept. 5	Nov.	5	Buff Bronze	S-1
(Br. Rayonnante)	July 26	•				P-3
Nomago	•	Sept. 5	Nov.	5	Bronze	
Mamaru		Sept. 5	Nov.	5	Buff Bronze	S-2
Rayonnante		Sept. 5	Nov.	5	Pink	S-2
Peggy Ann Hoover		Sept. 5	Nov.	5	Pink	S-1
-331		11-WEEK V				S-1
Lorraine ORDER 50 CUT	Aug. 2	Sept. 10	Nov.		Yellow	

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## Pot Plant Varieties

	Last	Spray	Date		D.C.
Variety	Pinch	Disbud	Flowering	Туре	Price Classification
	W H	ITE			
		VARIETY			
Christina	Aug. 30	Disbud	Oct. 23	L.F. Inc.	S-1
	9-WEEK	VARIETIES			3-1
Granite State	Aug. 30	Disbud	Oct. 25	L.F. Inc.	5-3
Queen's Lace	Sept. 13	Disbud	Nov. 1	Spider	S-1
Wilson's White	Aug. 30	Disbud	Nov. 1	L.F. Inc.	P-3
Indianapolis White		VARIETIES			
Richard Mandel	Sept. 13 Sept. 6	Disbud	Nov. 5	L.F. Inc.	5-3
Little America	Sept. 6	Disbud Disbud	Nov. 5 Nov. 10	L.F. Inc.	S-2
			MOV. 10	Int. Anem	. 5-3
Marketeer	Sept. 13	VARIETIES	Nov. 18		
Long Island Beauty	Sept. 13	Disbud	Nov. 18	L.F. Inc.	S-3
White Frick	Sept. 13	Disbud	Nov. 20	L. Anem. L.F. Inc.	S-3 S-2
		VARIETIES	1101. 20	h.F. IRC.	3-2
White Lady	Sept. 20	Disbud	Nov. 25	I Amous	
Margaret Moeller		Disbud	Dec. 3	L. Anem.	P-2 S-3
		2.3304	500.	h.r. mc.	3-3
		LOW			
Balana		VARIETIES			
Arlora	Aug. 30	Disbud	Oct. 15	L. Pom.	P-1
Gold Lode	Aug. 30	Disbud	Oct. 15	L.F. Dec.	S-3
Blazing Gold	Aug. 30 Aug. 30	Disbud Disbud	Oct. 20 Oct. 23	L.F. Inc.	5-3
			Oct. 23	L.F. Inc.	5-3
Ordalia	9-WEEK Aug. 30	VARIETIES Disbud	0.4 05		
Smith's Superlative	Aug. 30	Disbud	Oct. 25 Oct. 25	L. Pom.	P-1
Yellow Bergen	Aug. 30	Disbud	Oct. 25	L.F. Inc. L.F. Inc.	S-2 S-2
Sunglow	Aug. 30	Disbud	Oct. 25	L.F. Inc.	5-2 5-3
Golden Glory	Aug. 30	Disbud	Nov. 1	L.F. Inc.	5-2
Yellow Lace	Sept. 13	Disbud	Nov. 1	Spider	S-1
Gold Lace	Sept. 13	Disbud	Nov. 1	Spider	P-2
Hooked Yellow Lace	Sept. 13	Disbud	Nov. 1	Spider	P-2
	10-WEEK	VARIETIES			
Dark Indianapolis Yellow	Sept. 13	Disbud	Nov. 5	L.F. Inc.	5-2
Indianapolis Yellow	Sept. 13	Disbud	Nov. 5	L.F. Inc.	5-3
Yellow Beauty	Sept. 5	Disbud	Nov. 10	L.F. Inc.	5-2
Honey Dew	Sept. 6	Disbud	Nov. 12	L.F. Inc.	5-2
Weller Western		VARIETIES			
Yellow Marketeer	Sept. 13	Disbud	Nov. 18	L.F. Inc.	P-2
Bonnaffon DeluxeFriendly Rival	Sept. 13	Disbud	Nov. 20	L.F. Inc.	5-3
Purdue	Sept. 13 Sept. 13	Disbud Disbud	Nov. 20 Nov. 20	L.F. Inc.	S-2 S-1
Marie DePetris	Sept. 13	Disbud	Nov. 20	L.F. Inc.	5-1 S-2
		VARIETIES	1101, 29	hota IIIio	J-2
Sungold	Sept. 20	Disbud	Nov. 25	L.F. Inc.	5-2
Yellow Moeller	Sept. 20	Disbud	Dec. 3	L.F. Inc.	5-2 S-1
		VARIETY	500, 5	Best o 1110-o	
Dauntless	Sept. 27	Disbud	Dec. 13	L.F. Inc.	S-1
	ochi. Xi	שומונוע	200. 10	her alle	9-1



## Gloeckner Chrysanthemin Manual Chrysanthemin Manual Chrysanthemin

## Pot Plant Varieties

Variety	Last Pinch	Spray or Disbud	Flowering Date	Type	Price Classification
BRC	NZE	and	RED		
	9-WEEK	VARIETIES			
Hilda Bergen	Aug. 30	Disbud	Oct. 25	L.F. Inc.	S-2
Glitters	Sept. 13	Disbud	Oct. 28	L.F. Dec.	5-2
Red Glitters	Sept. 13	Disbud	Oct. 28	L.F. Dec.	5-2
Apricot Queen	Sept. 13	Disbud	Nov. 1	L.F. Inc.	5-2
Royal Bronze	Sept. 13	Disbud	Nov. 1	L.F. Inc.	P-2
	10-WEEK	VARIETIES			
Indianapolis Bronze	Sept. 13	Disbud	Nov. 5	L.F. Inc	5-3
Indianapolis Gold. Bronze	Sept. 13	Disbud	Nov. 5	Quilled	P-3
Dark Indianapolis Bronze	Sept. 13	Disbud	Nov. 5	L.F. Inc.	P-2
Gypsy	Sept. 6	Spray	Nov. 8	int. Anen	
Copperhead	Sept. 13	Disbud	Nov. 10	L. Pom.	5-1
Dark Bronze Masterpiece	Sept. 13	Disbud	Nov. 12	L. Pom.	S-2
Red King	Sept. 13	Disbud	Nov. 13	L. Single	P-1
Cadet	Sept. 13	Disbud	Nov. 14	L. Anem.	P-1
	11-WEEK	VARIETY			
Red Rolinda	Sept. 13	Disbud	Nov. 23	Int. Anen	n. \$-3
	12-WEEK	VARIETY			
Muto's Crimson	Sept. 20	Disbud	Dec. 1	L.F. Inc.	5-1
	·				
	PI	NK			
	8-WEEK	VARIETY			
Fairyland	Aug. 30	Disbud	Oct. 15	Int. Pom.	P-1
A COLO Y COLOR		VARIETY			
Bluechip	Aug. 30	Disbud	Nov. 1	Int. Pom.	P-1
Diuccaip	_	VARIETIES			
For Athenie and I Dimin		Disbud	Nov. 5	L.F. Inc.	S-3
Indianapolis Pink	Sept. 13 Sept. 6	Disbud	Nov. 8	L. Pom.	P-1
Portrait Cover Girl	Sept. 6 Sept. 6	Disbud	Nov. 10	L. Anem.	P-1
	Sept. 6	Disbud	Nov. 10	Int. Pom.	
Queen of Pinks	Sept. 6	Disbud	Nov. 10	L. Pom.	5-3
Masterpiece	Sept. 13	Disbud	Nov. 12	L. Pom.	5-3
Rose Masterpiece	Sept. 13	Disbud	Nov. 12	L. Pom.	S-2
Salmon Masterpiece	Sept. 13	Disbud	Nov. 12	L. Pom.	5-2
Samuel Master Prece		VARIETIES			
Camala	Sept. 13	Disbud	Nov. 15	L. Anem.	P-1
Carole Helen Frick	Sept. 13	Disbud	Nov. 20	L.F. Inc.	S-2
	Sept. 13	Disbud	Nov. 20	L. Anem.	S-1
Majorette Polka	Sept. 13	Disbud	Nov. 20	L. Anem.	
Illini Formal	Sept. 13	Disbud	Nov. 23	Int. Pom.	P-1
Lillia I Villia		VARIETY			
December 1 Vander		Disbud	Nov. 25	L. Anem.	S-3
Beautiful Lady	Sept. 20	Disting	1401. 25	E	





Growing Large Mums Using Wire Square Supports

## **Collections**

Rooted Cuttings of a given number of varieties in any one general group may be ordered as a collection when varieties are not specified. Such collections are priced as follows:

Α.	250 r. c	50 each of 5 varieties	\$14.25
В.	500 r. c	50 each of 10 varieties	25.50
C.	1000 r. c	or 100 each of 5 varieties	48.00
		50 each of 20 varieties 100 each of 10 varieties	
D.	2500 r. c	200 each of 5 varieties	112.50
		50 each of 50 varieties 100 each of 25 varieties 250 each of 10 varieties 500 each of 5 varieties	

## PRICES FOR 50 OR MULTIPLES OF 50 OF A VARIETY PER SHIPMENT ARE INDICATED IN THIS TABLE

Price Classification	PER 50 50	100-250	;. 300-450	PER 100 500-950	1000-2450	2500 up
P-0	7.50	14.25	13.50	12.75	12.00	11.25
	6.25	12.00	11.50	11.00	10.50	10.00
P-1	5.00	9.50	9.00	8.50	8.00	7.50
P-2	4.50	8.55	8.10	7.65	7.20	6.75
P-3	4.00	7.60	7.20	6.80	-6.40	6.00
S-1	3.50	6.65	6.30	5.95	5.60	5.25
S-2	3.25	6.15	5.85	5.50	5.20	4.85
S- <b>3</b>	3.00	5.70	5.40	5.10	4.80	4.50



### New Introductions - Garden Varieties

#### WHITE

#### **OSTOSA**

Sept. 25

Solid pure white medium pompon type. Vigorous, semi-dwarf habit. Very free flowering with good substance.

#### LIMELIGHT

Oct. 5

Very free and productive solid white pompon with a greenish cast. Excellent substance and form as well as placement. This variety should be outstanding for cutting besides making a very showy white pompon for the garden.

### YELLOW

#### BUTTERCUP (H)

Oct. 1

Large golden yellow incurving bloom. Free growth and good foliage as well as free flowering.

#### SUNSTONE

Oct

Very free and vigorous plant producing many blooms of soft yellow spoon or spider like blooms on good stems. Tall habit of growth. Useful for cutting as well as garden decoration.

#### SARASOTA

Oct. 15

Lively yellow solid pompon with good size and substance. Vigorous and productive, therefore suitable for cut flowers.

### BRONZE & RED

#### REGINA

Oct. 1

Large decorative blooms of a pleasing coral apricot bronze color. Very free flowering.

### CALUMET

Oct. 10

Outstanding full decorative blooms of good size and substance produced on strong clean stems of good length. Color is a lively apricot with a luminous glow. This is a Rubellum hybrid which produces high quality blooms with almost perfect stems and sprays without shading.

### CHOPIN

Oct. 15

Large incurved light bronze averaging 4'' to  $4\frac{1}{2}''$  which grows 20 or more blooms to the plant. Very strong stems and vigorous semi-dwarf growth.

#### ARVIS

Oct. 15

Vivid bronze small pompon. Free growth and good stems.

### PINK

#### CORONA (H)

Oct. 5

An outstanding vivid pink daisy shading to wine. Of good size and excellent substance. Good growth and foliage. Excellent for cutting and garden decoration.

Prices above 10 varieties, each: 50 Cuttings for \$7.50; 100-250, \$14.25 per 100; 300-450, \$13.50 per 100; 500-950, \$12.75 per 100; 1000-2450, \$12.00 per 100; 2500-up \$11.25 per 100.

### SPECIAL COLLECTIONS OF GARDEN VARIETIES

For growers who are not familiar with Garden Varieties, but who want a well-balanced assortment, we offer the following collections which include the better varieties.

SPECIAL No. 1
Rooted Cuttings
Our selection
Ten taller varieties
for cutting.

SPECIAL No. 2
Rooted Cuttings
Our selection for pots
or bedding.

SPECIAL No. 3
Rooted Cuttings
Our selection
Half for cutting
Half for bedding.

SPECIAL No. 4
Rooted Cuttings
Our selection for
Easter, Mother's Day
or Memorial Day Pots
(Specify Blooming Date)

### PLEASE SPECIFY NUMBER OF VARIETIES.

250 r. c. \$ 14.25

50 each of 5 varieties

50 each of 20 varieties

100 each of 10 varieties

200 each of 5 varieties

250 r. c. \$ 25.50

50 each of 10 varieties

50 each of 50 varieties or
100 each of 5 varieties

1000 r. c. \$ 25.50

SYMBOLS — (L) Large — (D) Decorative — (P) Pompon — (C) Cushion — (S) Single — (B) Button — (C-F) Carnation Flowered.

\*Recommended for Mother's Day pot plants — pinched and short day treatment same day.

D Varieties recommended as better when disbudded.

Variety	Size and Type	Color	Maiaha	AA	Pric
,	-770	COIOI	Height	Matures	50 O
		WHITE			
Osage	(D)	White	Med.	Sept. 5	\$7.
Candlelight	(D)	Ivory	Med.	Sept. 5	3.
D. Ahrens	(D)	White	Tall	Sept. 10	3.
Paper White	(D)	White	Med.	Sept. 10	3.
Chris Columbus	(LD)	Cream	Tali	Sept. 15	3.
Wh. CushionCalcite	(C)	White	Short	Sept. 15	3.
Drifted Snow	(D) (D)	Cream	Med.	Sept. 15	3
Powder Puff	(0)	Cream	Med.	Sept. 15	3
(Cushion)	(D)	3465 14			
Polar Ice	(LD)	White	Short	Sept. 15	3
Wh. Bounty	(B)	White	Med.	Sept. 15	3
Wh. Tower	(LP)	White	Tall	Sept. 15	3
Wh. Wonder	(LP)	Cream	Tall	Sept. 15	3
Shalimar (H)	(LP)	[vory	Med.	Sept. 25	3
Ostosa (New)	(LP)	Cream White	Tall	Sept. 25	4
Wh. Cloud	(D)	White	Short	Sept. 25	7
Pepita	(B)	White	Tall	Sept. 25	3
Snow Fall	(D)	White	Med.	Sept. 28	3
Ermine	(D)		Med. Med.	Oct. 1	3
Spindrift	(LD)	Ivory White	Med.	Oct. 1	3
Winterset (H)	(LD)	White	Med.	Oct. 1 Oct. 5	5
Limelight (New)	(P)	White	Med.	Oct. 5	3
Lyric	(S)	White	Short	Oct. 5	7
Avalanche	(LD)	Cream	Tall	Oct. 5	3
Horizon	(P)	White	Med.	Oct. 5	4
Youdath's Wh	(LD)	White	Med.	Oct. 5	3
Marshmallow (New)	(5)	White	Short	Oct. 5	5
Monogram	(5)	White	Short	Oct. 5	3
Snow Elf	(P)	White	Med.	Oct. 8	3
Classic	(B)	White	Tall	Oct. 10	3
Maestro	(P)	White	Short	Oct. 10	3
Renown	(5)	White	Med.	Oct. 10	3
Wh. Spoon	(Spoon)	White	Med.	Oct. 10	3
Silverplate	(D)	White	Med.	Oct. 12	3
Silver Ball	(P)	White	Tall	Oct. 15	3
rene	(B)	White	Med.	Oct. 15	3
Norona	(SP)	White	Med.	Oct. 15	4
		YELLOW			
Pathfinder	(C-F)	Lemon	Med.	Aug. 28	7.
Bufferball (H)	(P)	Golden	Short	Sept. 1	3
Early GoldGolden Hours	(P)	Golden	Short	Sept, 5	3.
Genista	(P)	Chrome Yellow	Med.	Sept. 8	3
Yel. Supreme (H)	(P)	Canary	Med.	Sept. 12	6
Pomponette	(C)	Brt. Lemon	Short	Sept. 15	3
Yel.Cushion	(P)	Golden	Short	Sept. 15	3.
Sumanoo	(C)	Light Yellow	Short	Sept. 15	3.
Sunapee Yel. Chris. Columbus	(P)	Deep Lemon	Tall	Sept. 15	3.
rel. Avalanche	(LD)	Brt. Lemon	Med.	Sept. 15	3.
Early Yellow		Lt. Lemon	Tall	Sept. 15	3.
Defiance (H)	(B)	Dp. Lemon	Short	Sept. 15	3.
Golden Carpet	(D) (P)	Golden	Tall	Sept. 15	3.
Bowl O' Gold	(P) *	Golden Canary	Short Short	Sept. 15 Sept. 15	4. 7.
(Cushion) Ming	(P)	Orange Yellow	Med.	Sept. 18	4.
Sept. Sunshine	(5)	Brt. Lemon	Med.	Sept. 20	3.
Wychwood	(LP)	Canary	Med.	Sept. 20	3.:
Canary Wonder	(P)	Canary	Med.	Sept. 25	4.0
	(LP)	Dp. Lemon	Tall %	Sept. 25	3.5
Chas. Nye					
				Sept 25	3 1
Chas. Nye Honeycomb Moonlight	(P) (D)	Golden Brt. Yellow	Med. Med.	Sept. 25 Sept. 25	3.5

\$ Variety	ize and Type	Color	Height	Matures	Price 50 On
	YELL	OW (Con	t'd)		
Tangerine	(LD)	Dp. Orange	Med.	Sept. 25	3.5
Flaxen Beauty	(LD)	Light Lemon	Med.	Oct. 1	4.
King Midas	(LD)	Lemon	Med.	Oct. 1	3.0
*Chiquita	(B)	Deep Lemon	Med.	Oct. 1	3.5
James Eadie	(LP)	Deep Chrome	Tall	Oct. 5	3.5
Garland	(S)	Lemon	Short	Oct. 5	4.0
Polaris	(5)	Golden Buff	Med.	Oct. 5	3.
Vanguard	(LP)	Golden	Med.	Oct. 5	4.0
Mrs. Rotan	(LD)	Deep Chrome	Med.	Oct. 5	3.:
Dwight Douglas	(LD)	Golden Yellow	Med.	Oct. 5	6.:
Sunstone (New)	(Spoon)	Light Yellow	Tall	Oct. 8	7.
*Yel. Spoon	(Spoon)	Light Yellow	Med.	Oct. 10	3.
Treasure	(P)	Golden	Tall	Oct. 10	4.
Golden Spoon	(Spoon)	Golden	Med.	Oct. 10	3.
*Yel. Blankef	(B)	Brt. Lemon	Med.	Oct. 10	3.
Bright Forecast	(P)	Brt. Lemon	Med.	Oct. 10	3.
*Goldrush	(S)	Lemon	Med.	Oct. 10	3.
Sweepstake	(P)	Lemon	Med.	Oct. 12	3.
*Lemonade	(P)	Ivory Yellow	Med.	Oct. 12	3.
Judith Anderson	(P)	Golden	Med.	Oct. 15	3.
*Gold Lode	(L-Inc.)	Golden	Med.	Oct. 15	3.
Rodell Imp	(B)	Light Lemon	Med.	Oct. 15	3.
Yel. Irene	(B)	Light Lemon	Med.	Oct. 15	3.
Buttercup (H) (New)	(L-Inc.)	Golden	Short	Oct. 15	7.
Old Gold	(P)	Golden	Med.	Oct. 15	3.
Sarasota (New)	(P)	Brt. Lemon	Med.	Oct. 15	7.
Arlora (New)	(LP)	Soft Yellow	Short	Oct. 15	5.
	BROI	NZE and	RED		
Early Harvest	(C)	Mah. Orange	Short	Sept. 8	3.
Harbinger	(D)	Golden Bronze	Short	Sept. 8	3.
*Early Bronze	(B)	Orange Bronze	Short	Sept. 8	3.
*W. P. Snyder	(LP)	Apr. Orange	Med.	Sept. 10	3
Autumn Song	(D)	Wine Rose	Med.	Sept. 10	3
Apache	(LD)	Red & Gold	Med.	Sept. 15	7.
Red Gold	(B)	Red & Gold	Med.	Sept. 15	3
Orloma	(D)	Apr. Bronze	Med.	Sept. 15	6
Overly	(C)	Bronze	Med.	Sept. 20	7
Sept. Bronze	(B)	Golden Bronze	Med.	Sept. 20	3
Goblin	(P)	Golden Bronze	Tall	Sept. 20	3
Red Glow	(P)	Dark Red	Med.	Sept. 20	3
*Orsona	(D)	Red & Bronze	Med.	Sept. 20	6
Scarlet Crimson	(D)	Brt. Red	Med.	Sept. 20	3
Mme. Cadillac	(P)	Raspberry Wine	Short	Sept. 20	6
Rouge Cushion	(C)	Brt. Red	Short	Sept. 25	4
Br. Wonder	(LP)	Rosewood	Med.	Sept. 25	4
Champ. Cushion	(C)	Deep Bronze	Short	Sept. 25	3
Comd. Cushion	(C)	Red	Short	Sept. 25	3
Mah. Cushion	(C)	Jasper Red	Short	Sept. 25	3
Marionette	(P)	Rust Red	Med.	Sept. 25	3
Holiday (H)		Golden Bronze	Med.	Sept. 25	4
*Remembrance	(LD)	Deep Carmine	Med.	Sept. 28	3
Kath. Lehman	(LD)	Orange Bronze	Med.	Sept. 28	4
Admiration	(LD)	Salmon Fawn	Med.	Sept. 28	7
Jubilee (H)		Crimson	Med.	Oct. 1	5
Mogul	(P)	Orange Rust	Med.	Oct. 1	4
Reverie		Buff Bronze	Med.	Oct. 1	7
Fiesta	(P)	Orange Rust	Med.	Oct. 1	3
Magnificent	(LD)	Plum Red	Tall	Oct. 1	3
Red Cloud (Cushion)		Scarlet	Med.	Oct. 1	3
Red Riding Hood		Brt. Red	Med.	Oct. 1	3
	(C)	Deep Red	Short	Oct. 1	3
Sam Williston	(10)	Crimson	Med.	Oct. 1	7
(Cushion)			Med.	Oct. 1	3
(Cushion) Gondolier	(LD)	Rrt Pad	1110-011	7 ***	4
(Cushion) Gondolier Bonfire	(D)	Brt. Red Plum Red	Med.	Oct. 1	
(Cushion) Gondolier Bonfire Brigadier	(D) (LP)	Plum Red	Med. Med.	Oct. 1	7
(Cushion) Gondolier Bonfire Brigadier Regina (New)	(D) (LP) (LD)	Plum Red Apricot Bronze	Med.	Oct. 1	7
(Cushion) Gondolier Bonfire Brigadier Regina (New) Card. Spoon	(D) (LP) (LD) (Spoon)	Plum Red Apricot Bronze Red Bronze	Med. Med.	Oct. 1 Oct. 1	3
(Cushion) Gondolier	(D) (LP) (LD) (Spoon) (P)	Plum Red Apricot Bronze Red Bronze Sal. Bronze	Med. Med. Short	Oct. 1 Oct. 1 Oct. 3	
(Cushion) Gondolier	(D) (LP) (LD) (Spoon) (P) (D)	Plum Red Apricot Bronze Red Bronze Sal. Bronze Mahogany	Med. Med. Short Tall	Oct. 1 Oct. 1 Oct. 3 Oct. 5	3 5
(Cushion) Gondolier	(D) (LP) (LD) (Spoon) (P) (D) (LD)	Plum Red Apricot Bronze Red Bronze Sal. Bronze	Med. Med. Short	Oct. 1 Oct. 1 Oct. 3	3 5 4

Variety	Size and Type	Color	Height	Matures	Price 50 O
BRO	DNZE	and RED	(Cont'	d )	
Ruby Pompon	(P)	Ruby Crimson	Med.	Oct. 5	3.
Red Velvet		Dark Crimson	Med.	Oct. 5	3.
*Mona		Rust Branze	Med.	Oct. 5	3.
AvalonCouragous		Orange Bronze	Tall	Oct. 5	4.
*Mrs. DuPont	(LD)	Dark Ruby	Med.	Oct. 5	3.
Beacon		Coral Buff Coral Apr.	Tall	Oct. 5	3.
Panorama		Orange Rust	Tall	Oct. 8	3.
Aviator		Copper	Tall Med.	Oct. 8	4.
Success		Deep Crimson	Med.	Oct. 8	3.
Amber Glow	(LD)	Rosey Bronze	Tali	Oct. 8 Oct. 8	3.
Miguel		Raspberry Red	Tali	Oct. 8	3 6
Calumet (H) (New)		Apricot	Med.	Oct. 10	7.
The Chief		Scarlet & Gold	Med.	Oct. 10	3
Huntsman	(LD)	Scarlet Orange	Tall	Oct. 10	3.
Bokhara		Crimson	Med.	Oct. 10	3.
Carnival	(LP)	Burnt Orange	Med.	Oct. 10	3
Caravan		Salmon Bronze	Med.	Oct. 10	4
Blueblood	(D)	Amaranth Red	Tall	Oct. 10	4
Orpheus	(LP)	Roman Red	Tali	Oct. 10	6
Carmine Queen	(LP)	Carmine	Tall	Oct. 10	3
*Bamboo	(S)	Buff Orange	Tall	Oct. 10	3.
Fireside	(D)	Burnt Orange	Tall	Oct. 10	3
Nytoda	(5)	Golden Apr.	Med,	Oct. 12	4
Admiral		Dark Red	Med,	Oct. 12	4.
Fashion	(D)	Rosewood	Med.	Oct. 12	4
Witchery	(LD)	Golden Bronze	Med.	Oct. 12	3.
Nokomis Nocturne		Red Bronze	Med.	Oct. 12	3.
Moonmaid (New)	(P)	Crimson	Med.	Oct. 12	3
James Stewart	(P)	Sal. Bronze Apr. Gold	Tali	Oct. 14	5
Robinhue	(LD)	Dark Red	Tall	Oct. 15	3,
Br. Pyramid	(LD)		Tall	Oct. 15	3.
Mayford's Triumph	(L-Inc.)	Orange Bronze Scarlet Bronze	Tali T-11	Oct. 15	3.
Detroiter		Red Bronze	Tall Tall	Oct, 15	3.
*Carmelita		Apr. Bronze	Tail	Oct. 15	3.
Cocktail	(P)	Salmon Bronze	Med.	Oct. 15	3.
Rajah	(5)	Scarlet	Tall	Oct. 15 Oct. 15	4.
Chopin (New)	(L-Inc.)	Lt. Bronze	Med.	Oct. 15	4. 7.
Arvis (New)	(P)	Bronze	Tall	Oct. 15	7.
	PINK	and LAVE	NDER		
Gladness	(D)	China Rose	Short	Aug. 28	3.
Dr. Longley	(D)	Deep Lav.	Med.	Sept. 1	4.
Dr. Graham	(D)	Rose Pink	Med.	Sept. 1	4.
Sal. Precose	(D)	Lavender	Med.	Sept. 1	7.
Welcome	(LD)	Salmon Pink	Short	Sept, 1	3.
Rosa	(5)	Rose Pink	Med.	Sept. 1	3.
Purple Star	(C) (P)	Rose Pink	Med.	Sept. 5	7.
Barbara Small	····· (P)	Purple	Med.	Sept. 5	3.
Nye's Favorite	(D)	Lavender Lavender	Tall	Sept. 10	3.
Orchid Helen	(D)	Orch, Lavender	Med.	Sept. 10	3.
Royal Robe	(D)	Purple	Med. Med.	Sept. 10	4.
Chippewa	(LD)	Brt, Purple	Med.	Sept. 15	5.
Violet	(P)	Amaranth Pink	Med.	Sept. 15	3.
Fairbow	(P)	Lavender Pink	Med.	Sept. 15 Sept. 20	3.
Tapesiry	((D) <sup>(i)</sup>	Brt. Pink	Med.	Sept. 20	3. 4.
Heather Bloom	(D)	Heather Pink	Med.	Sept. 20	3.
Aleri	(LD)	Dark Purple	Med.	Sept. 20	3.
Olive Longland	(LD) *	Apr. Salmon	Med.	Sept. 25	3.
Imp. Early Wonder	(P)	Lavender	Med.	Sept. 25	3.
Spellbound	(D)	Lavender	Med.	Sept. 25	3.
Capt. J. Smith	(C)	Lavender , Pink	Short	Sept. 25	3.
Maj. Cushion	(C)	Lavender	Short	Sept. 25	3.
Pk. Beauty,	(D)	Salmon Pink	Med.	Sept. 25	3.
Sept. Dawn	(D)	Rose Pink	Med.	Sept. 25	3.
Pk. Opal	(P)	Persian Rose	Med.	Sept. 28	4.
Rosita	(B)	Lavender Rose	Med.	Sept. 28	3.
Molindo Deserves	(P)	Lavender Rose	Med.	Sept. 28	5.
Malinda Brown	*****				
Betty	(LD)	Pink Rose Ctr.	Tali	Sept. 28	3.
Malinda Brown Betty Misty Maid Pat. Lehman	(LD)				3. 3. 4.

Variety	Size and Type	Color	Height	Matures	Price 50 Onl
PIN	NK and	LAVENDER	(Cont	t'd)	
Fascination	(LD)	Lavender Pink	Med.	Oct. 1	5.00
D Myrtle Walgreen		Amar. Purple	Med.	Oct. 1	3.5
*Tiffany Rose		Deep Rose	Med.	Oct. 1	3.00
Mischief		Purple	Short	Oct. 1	7.5
Alex Cummings	(LD)	Deep Rose	Tall	Oct. 3	5.0
Enterprise		Amaranth	Tall	Oct. 5	4.5
Corona (H) (New)		Deep Lavender	Tall	Oct. 5	7.5
*Pk. Surprise		Lavender	Tall	Oct. 5	3.5
*Lav. Lady		Lavender Pink	Tali	Oct. 5	3.5
Petrisian Mauve		Mauve	Med.	Oct. 5	7.5
Petrisian Pink	(P)	Pink	Med.	Oct. 5	7.5
Petrisian Rose		Dark Pink	Med.	Oct. 5	7.5
Ponca		Dark Lavender	Short	Oct. 10	3.5
Dream Girl	(P)	Light Lavender	Med.	Oct. 10	3.5
Argonne		Dark Lavender	Med.	Oct. 10	3.5
*Coutier	(D)	Lavender Pink	Med.	Oct. 10	4.0
Time	(LP)	Lavender	Med.	Oct. 10	3.5
Orch. Spoon	(Spoon)	Orch. Lavender	Med.	Oct. 10	3.5
Rose Spoon	(Spoon)	Lavender Rose	Med.	Oct. 10	3.0
Lassie		Dark Pink	Med.	Oct. 10	4.0
*Masquerade		Lavender Rose	Med.	Oct. 10	3.5
*Joybringer		Salmon Rose	Short	Oct. 10	3.5
Ronnie	(B)	Dark Lavender	Med.	Oct. 12	3.5
*Serenade	(S)	Magenta	Tall	Oct. 10	3.5
Elizabeth Hood		Lavender Pink	Med.	Oct. 12	4.5
Allegro		Shrimp Pink	Med.	Oct. 12	3.2
Adagio		Raspberry Rose	Tall	Oct. 12	3.5
Sonnet		Salmon Pink	Med.	Oct. 14	5.0
Dawn Rose		Grenadine Pink	Med.	Oct. 15	3.
*Jewell		Lavender Pink	Med.	Oct. 15	3.5
Dk. Jewell		Dark Lavender	Med.	Oct. 15	3.5

LARGE FLOWERING MUMS WHICH ARE NORMALLY GROWN IN THE GREENHOUSE, BUT ARE ALSO GOOD OUTSIDE, SHOULD BE DISBUDDED TO ONE BLOOM PER STEM.

		WHITE				
Silver Sheen	(M-Inc.)	White	Tall	Oct.	20	3.00
	Y	ELLOW				
Harvest Golden	(M-Inc.)	Deep Golden	Tall	Oct.	10	3.50
Gold Lode	(M-Ref.)	Lemon	Tali	Oct.	15	3.00
Celestra	(M-Inc.)	Lemon	Tall	Oct.	15	3.25
Mrs. Kidder	(L-Inc.)	Deep Lemon	Tall	Oct.	15	3.00
Buttercup (H) (New)	(M-Inc.)	Golden	Short	Oct.	15	7.50
	BRON	IZE and R	RED			
Mayford's Triumph	(M-Inc.)	Scarlet Orange	Tall	Oct.	10	3.50
Amber Bright	(M-Inc.)	Amber Bronze	Med.	Oct.	15	3.50
Chopin (New)	(M-Inc.)	Light Bronze	Med.	Oct.	1.5	7.50
P	INK a	nd LAVE	NDER			
Pink Chief	(L-Inc.)	Lavender	Tall	Oct.	15	3.00
Major Bowes	(L-Inc.)	Deep Lavender	Tall	Oct.	15	3.00

PINCHING	SCHEDULE	FOR GARDEN	CHRYSANTHEMUMS
Natural		Pinching Date	Pinching Date
Flowering Date		for Cut Flowers	for Border Plants
Sept. 1		June 14	July 12
Sept. 15		June 21	July 19
Sept. 30		June 28	July 26
Oct. 10		July 5	Aug. 2
Oct. 15		July 12	Aug. 9

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FEB.	7 14	8 15 22	9 16	17	11	12	13	3	AUG	1. 2.	8 5 1	9 6 3 :	10 17 24	11 18	12 19	13 20	7 14 21 28	FEB.	6 13	7 14 21	8 15 22	9 16	10 17	11 18	5 12 19 26	AUG.	7 14 21	8 15	16 23	10 17 24	18	5 12 19 26	20
MAR.	7 14 21	1 8 15 22 29	9 16 23	17 24	11 18	12	1.	3	SEP	1	2 1 9 2	3	14	8 15 22	9 16	10 17 24	4 11 18 25	MAR.	6 13 20	14 21	1 8 15 22 29	16 23	10 17 24	11 18	12 19	SEP.	11 18	12	13 20	14 21	8 15 22	2 9 16 23 30	10 17
APR.	18	5 12 19 26	20	14 21	8 15 22	23	17	7	OCT	1	0 1 7 1 4 2	8	12	13 20	14 21	8 15 22	2 9 16 23 30	APR.	17	18	5 12 19 26	13 20	21	8 15 22	23	OCT.	9 16 23	10 17	11 18	12 19	13 20	7 14 21 28	15 22
MAY	9 16 23	3 10 17 24 31	11 18 25	12 19	13 20	14 21	1.	5 2	NOV	1 2	7 4 1	8 5 2	9 16 23	10 17	11	12	6 13 20 27	MAY	8 15	9 16 23	10 17 24	11 18 25	12 19	13 20	21	NOV.	13	14 21	15 22	16 23	17	4 11 18 25	19
JUNE	6 13 20	7 14 21 28	8 15 22	16 23	10 17 24	11	1:	2	DEC	1	2 I 9 2	3	14	8 15 22	9 16 23	10	4 11 18 25	JŲNĘ	12 19	20	7 14 21 28	22	16 23	10 17	18	DEC.	11 18	19	13 20	14 21	15 22	2 9 16 23 30	17 24

SHADING CLOTH PRICES
AVAILABLE ON REQUEST

## Insecticides, Fungicides and Fumigants

Aramite 15 W	*******************************	*****	4 lb. bag	3.20
Deenate 50 W (DDT)	4 lbs.	2.25	48 lb. Case	
	0.11	0.45	(12-4 lb. bags	
Fermate	3 lbs.	2.45	Case (36 lbs.)	25.80
			(24 cans)	
Fulex Parathion Fumigators	1,000 cu. ft.	9.00	5,000 cu. ft.	
For Red Spiders, Aphids, and Thrips	2,000 cu. ft.	9.00	10,000 cu. ft. 20,000 cu. ft.	
Fulex Aphid-Smoke Fumigators	1,000 cu. ft.	9.00	5,000 cu. ft.	
For Aphids and Adult White Flies	2,000 cu. ft.	9.00	10,000 cu. ft.	15.00
			20,000 cu. ft.	24.00
Fulex Spider-Mite Fumigators				
For Red Spiders, including some Parathion-		9.00	5,000 cu. ft.	
resistant strains on carnations, chrysanthe-	2,000 cu. ft.	9.00	10,000 cu. ft.	
mums and snapdragons	***************************************		20,000 cu. ft.	30.00
Isotox 1 (supplied in 50 lb. bags only)	50 lbs.	8.50		
Lindane (Jamtox) 11/2% Dust			50 lbs. (min.)	11.70
25% Wettable Powder			4 lbs.	11.00
Nicofume Liquid			gallon (8 lbs.)	11.95
Nicofume Pressure Fumigators				4.60
	1 lb. cans (12	cans)		7.95
NNOR	• • • • • • • • • • • • • • • • • • • •		gal.	10.00
Optox (10% DDT)			gal.	12.00
Orthocide 50 W	5 lbs.	5.70	50-lb. drum	54.00
Plantfume 103	5,000 cu. ft.			10.50
	20,000 cu. ft.	carton —	12	12.00
Parathion Spray 15% Wettable			4-lb. bag	3.50
Parzate (Powder)	3 lb. bags	2.85	Case (36 lbs.)	31.20
(Liquid)			5 gal. cans	9.50
P-40	25 lbs.	7.25	50 lbs.	13.75
			100 lbs.	26.00
Rhothane (DDD) 50% Wettable Powder	4-lb. carton	2.00	50 lbs.	23.00
Sodium Selenate			1 lb.	7.00
Systox (Emulsion)	1 qt.	10.00	1 gal.	32.00
Vapotone XX		*******	1 gal.	12.00
Zerlate	3 lbs.	2.45	case (36 lbs.)	25.80

For your other needs refer to your

Carnation Manual and

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